Phi Delta KAPPAN

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FIFTY-FOURTH YEAR

VOLUME XLI
NUMBER 9

June 1960

A JOURNAL FOR THE PROMOTION OF RESEARCH, SERVICE, AND LEADERSHIP IN EDUCATION

Phi Delta KAPPAN

VOLUME XLI • NUMBER 9

Journal of Phi Delta Kappa, Professional Fraternity for Men in Education

For the promotion and improvement of free public education through a continuing interpretation of the ideals of research, service, and leadership

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Entered as second-class matter at the post office at Spencer, Indiana, under the Act of August 24, 1912. ☆ Published monthly, October to June, inclusive, by Phi Delta Kappa, Inc., at Spencer, Indiana. Acceptance for mailing at a special rate of postage is provided for in the Act of February 28, 1925. ☆ Subscription rate, $4.00 per year. Single copies, while available, 50 cents each, from the Bloomington Office. ☆ Official statements of Phi Delta Kappa are so indicated. Other statements and articles are published as expressions of the personal views of the writers. ☆ Listed in *Education Index*, published by the H. W. Wilson Company, New York, N. Y. ☆ EDITORIAL OFFICE: Phi Delta Kappa, Eighth St. and Union Ave., Bloomington, Indiana. ☆ Member, Educational Press Association of America.

Address all communications, purchase orders, and address changes to the Business Manager, PHI DELTA KAPPAN, Eighth St. and Union Ave., Bloomington, Indiana.

Eight Academicians Who Can Be Wrong . . .

. . . found few things right with San Francisco schools. Here are excerpts from their recent manifesto.

FIRST, we believe that the purpose of education is to inform the mind and develop the intelligence. Recent pedagogical theory, however, has tended to make 'education for life in a democracy' the primary purpose of the public schools, interpreting and applying that phrase in a sense profoundly hostile to excellence in education. . . . " (p. 7)

"At the root of nearly every problem that our proposals will raise lies an attitude of indifference if not exactly of hostility to intellect that seems unduly prevalent throughout the system. . . . " (p. 7)

"Physical education should be reduced to two or three times a week. We recommend that a forceful attempt be made to change the present state requirement of five periods. . . . " (p. 12)

"We recommend that the qualifying examination for teachers test knowledge and understanding of subject matter rather than knowledge of pedagogy and educational theory, and that the examination for teachers of English include an assigned composition. As for professional education for teaching, it is incomparably more important for a teacher to be intelligent and to know his subject than to have 'taken' a prescribed series of teacher-training courses. A teacher who knows his subject will find ways to teach it. . . . " (p. 18)

"We recommend a systematically phonetic approach to reading. Perhaps the most formidable barrier to a more solid and mature public education in the United States is the failure of the schools to produce in sufficient numbers students who read rapidly, accurately, and with pleasure. . . . Some professional educationalists have simply accepted the idea that many children will never read satisfactorily. Others have discovered nervous disorders, diseases of the brain, and temporary deficiencies of sight and hearing to explain why many children cannot be expected to read satisfactorily. Yet, clearly, American children once read better. . . . " (p. 19)

"Quite apart from the practical advantage of being infinitely more effective, phonics has an immense pedagogical advantage over look—say: it encourages the child to think rather than to guess. . . . " (p. 20)

NO, dear friend, these are not items gleaned from back issues of the *CBE Journal*, the Council for Basic Education publication we are so fond of quoting. They are a fair sample, we think, of the content of a *Report of the San Francisco Curriculum Survey Committee* prepared for the Board of Education, San Francisco Unified School District, and published on April 1, 1960. Superintendent Harold Spears may have extra copies, if you are interested.

This report was drafted by a joint committee of eight academicians from the University of California (Berkeley) and Stanford University, who confessed in their introduction that it took a great deal more time than had originally been expected, what with the necessity to make it acceptable to all eight individuals, you understand. They have no regrets, however, about the expenditure of so much time on a matter of such vital importance.

We regret that we cannot reproduce here the entire 63-page report, replete with extensive biographical information about the distinguished survey team. Among them are at least three Guggenheim Fellows (the Stanford group didn't list "honors and awards," so we can't be sure about the number), one contributor of articles on George Bernard Shaw to *The Trollopian*, and a member of the Medieval Academy of America. (We were a little sorry for the associate professor of biological sciences who could list only one publication, of which he was co-author.)

Naturally, no member of the survey team is a member of Phi Delta Kappa. In fact, although no one mentioned it under honors, it seems likely that few if any of these men could qualify for a public school teaching certificate under the California laws.

Before growing serious about this matter, we'd like to suggest that the boards of trustees of the University of California and Stanford, as a turn-about-is-fair-play gesture, bring in a group of elementary teachers from the San Francisco schools to analyze the ills of those institutions. Haven't we heard rumblings of discontent because they are refusing to accept students of poor ability and/or training? The elementary teachers would have one great advantage as they look over the offerings and policies at the universities: they have been on campus as stu-

dents more recently than the academicians have been in the public schools as students.

IN fairness, it must be admitted that many of the recommendations of the San Francisco survey committee appear to be sound and insightful. Certainly some of them reflect a sensible and mature point of view that schoolmen should consider carefully, and we sincerely hope that the San Francisco Board of Education will listen to professional schoolmen who have done this.

If it does listen, however, the board is in for considerably more homework before it can conscientiously adopt a guide for overhaul of San Francisco schools. Let us look, for example, at just one of the recommendations, the one which would base the entire public school reading program on "systematic phonics." Although the survey team says that "a teacher who knows his subject will find ways to teach it," here is a problem of pedagogical technique in which the team shows singular interest and remarkable expertise, the latter based on half a dozen somewhat carelessly selected pieces of experimentation.

William S. Gray tells us in the new third edition of the *Encyclopedia of Educational Research* that approximately 100 experiments have been reported recently which aim to determine the efficiency of different methods of teaching beginning reading. They are largely inconclusive. Although he is quoted with obvious approval at one point in the San Francisco report, Gray is by no means on the phonics side of the fence. In fact, no reputable educator would be caught there today saying that phonics is it, period. The dichotomy made between "look—say" and phonics by the survey team, as most elementary teachers now admit, is a false one. Russell[1] collected data from 220 experienced school people in thirty-three states which show strong support, both in belief and in practice, for phonics *as part* of the elementary school's reading program; but phonics is only one of many aids. And now Fay and Sparks are about to publish again in the *Elementary School Journal* to show that extra emphasis on phonics does *not* result in a reader or speller who is significantly better than one who has had only a basic reading program.[2]

Yes, San Francisco, eight academicians can sometimes be wrong, and these eight are, in more than this one instance. Let that be a lesson to all of us.

—SME

[1] David H. Russell, "Teachers' Views on Phonics," *Elementary English* 32:371-375, 1955. (Russell, a University of California educator, includes California in his thirty-three states.)

[2] See Paul E. Sparks and Leo C. Fay, "An Evaluation of Two Methods of Teaching Reading," *Elementary School Journal* 57:386-390, 1957. Also, Leo C. Fay, "Trends in the Teaching of Elementary Reading," *Phi Delta Kappan* 41:345-348, 1960.

► Wisconsin's State Coordinating Committee for Higher Education has gone on record in "resolute opposition" to raising the student's share of the cost of public higher education, but the group declined to recommend that fees be gradually reduced until public higher education becomes "virtually free."

Approval followed a subcommittee report saying it was "greatly disturbed about the contention, given some prominence in the press of late, that students attending public colleges and universities should be required to shoulder a much heavier burden of the cost of public higher education. The subcommittee firmly believes that such action would be detrimental to the well-being of the state and nation."

► About 900 Fulbright scholarships for graduate study or pre-doctoral research in thirty different countries will be available for 1961-62, according to the Institute of International Education. In addition, the Inter-American Cultural Convention is offering a number of scholarships for study in Latin America.

Applications for both the Fulbright and IACC awards are now being accepted by the Institute of International Education, 1 East 67th Street, New York 21, N. Y. The institute administers both programs for the Department of State.

► As this was written, U. S. District Judge Frank Hooper had not yet ruled whether Atlanta schools should desegregate by next September. But the governor-appointed school study commission had recommended a "freedom of choice" plan after hearing more than 1,800 witnesses purporting to represent more than 115,000 persons.

Two proposed constitutional amendments were offered in the commission's majority report. They would: 1) Specify that no child shall be compelled against the will of parents or guardians to attend an integrated school and that such children shall be re-assigned or given a direct tuition grant. 2) Authorize the legislature to establish local school units that could close schools or re-open them according to the dictates of a majority of the qualified voters in the affected unit.

Recommended new laws would: 1) Provide for tuition grants or scholarships for children withdrawn from integrated schools and children whose schools have been closed as a result of state laws or court orders. 2) Make teacher retirement benefits available to teachers in private schools. 3) Enable school boards to establish pupil placement plans if the legislature accepted the "freedom of choice" recommendation.

Governor Vandiver says that no special session of the legislature will be held this summer.

TECHNOLOGY

and the instructional process

The author, now president of the Department of Audio-Visual Instruction, NEA, has been quoted (by *Time* magazine) as saying, with remarkable economy, "It is now possible not only to eliminate the teacher but the school system." Here Jim Finn spells out in somewhat greater detail his theories relating technological advance and education.

By **JAMES D. FINN**

FINN

TECHNOLOGY[1] relates to education in at least three major ways. First, in a society in which science and technology are primary, such as America, the society requires that the educational system insure an adequate supply of scientists and associated technicians. This requirement sets a curriculum problem, an organization problem, and many other problems associated with the screening, selection, and education of young people as potential additions to the nation's technical manpower.

Second, as a society becomes more and more technologically oriented and controlled, the question of the general education of all citizens is raised. The survival and management of the whole society theoretically require more general education in the sciences and technology for all. Pressures arise for more mathematics and science to be taught to the entire population. Again, curriculum problems, organization problems, and a host of nagging, persistent general education problems arise.

Third, because of the tendency for technology to have no limits and constantly to extend into new areas, it is inevitable that, in an advanced technical society, technology should begin to extend into the instructional process itself. As will be shown, this is particularly true when education has been, for a century or more, one of the areas of American society which has walled itself off from technological advances, and, consequently, has created a technological vacuum. That vacuum is now rapidly being filled.

It is with this third relationship—the application of technology to the educational, or, to be more precise, to the instructional process—that this paper is concerned. The three relationships just discussed—development of technicians, general education in technology, and the application

MR. FINN *(Alpha Epsilon 2514) is professor of education and chairman of the Department of Audio-Visual Education, University of Southern California.* *This article is a condensation of a longer paper published in the* Audio-Visual Communication Review *under the title, "Automation and Education: III. Technology and the Instructional Process." The paper was first presented at the ASCD Seminar on a Theory of Instructional Materials in Washington, D. C., November 10-15, 1959. The seminar was one phase of an ASCD project conducted by the U. S. Office of Education under provisions of the National Defense Education Act, Title VII, Part B. The AVCR article and this condensation have been printed with the permission of the Association for Supervision and Curriculum Development, National Education Association.*

[1] For purposes of this paper, no distinction is made between "science" and "technology" or between "pure" and "applied" science. The distinction between "basic" and "applied" research is perhaps more meaningful, but these two activities are still regarded here as positions on a continuum. From a societal point of view, it matters little whether the society is hit with new ideas or new processes that stem from the ideas, or, as is more likely, a combination of the two.

of technology to the instructional process—cannot eventually be completely separated. However, the third relationship is sufficiently different to merit thorough analysis.

Again for purposes of this paper, a finer distinction will now be drawn. Within the educational process itself there are three general areas in which technology can or is being applied. These are: (1) general administration, (2) testing, and (3) instruction. The uses of technical management systems, modern equipment, etc., represent the fairly obvious applications to the field of general administration. While it probably can easily be shown that this area of management is, taken as a whole, two or three decades behind its counterpart in industry, the problems associated with technology and school management are not as difficult as some of the others and will not, at this time, be considered. This is not to say that administration is not highly interrelated with the other two areas of testing and instruction, but the position can be taken that the problems arising from the latter two should guide the technical solutions in administration, not the other way around.

The second category, testing, is in many respects the most highly developed technology at present existing in American education. This is true both from a machine and from a systems standpoint. Further, the close relationships between psychological, achievement, and other types of testing and the instructional process are so well defined as to need no comment. However, with some exceptions, the technology of the instructional process can, for purposes of analysis, be isolated from testing. This arbitrary decision is made here in order to further the remainder of the discussion. We are left, then, with the instructional process by itself and can now turn to the impact of technology upon that process.

Development of Instructional Technology

The development of a technology of the instructional process is relatively new. In the pre-industrial phases of both education and industry, while industry was principally at the handwork, artisan level, the instructional process relied upon such devices as the slate, the hornbook, the blackboard, chalk, and limited single textbooks with few illustrations. Although attention will be confined principally to some of the symbols of technology—equipment and machines—it should be emphasized that other factors were in the same state. In the area of organization, for example, it is well known that the graded school is a late development.

We note the obvious changes in industry at the beginning of the 19th century—the invention of a group of related machines for power, for spinning and weaving, etc.—which made possible the factory system. Based on the work of Toynbee the elder, the term "Industrial Revolution" is applied to this period.[2] In education, however, the same revolution did *not* occur and instructional technology (with some exceptions here and there) remained at the pre-industrial level. During the last quarter of the century there was some indication of incipient change. Oliver notes that an exhibit from an American school "with maps, charts, textbooks, and other equipment" won admiration at the International Exposition in Vienna in 1873. He adds that the American school display at Paris in 1878 was even more outstanding.[3] Significantly, Oliver's last mention of international attention to American instructional technology was at Melbourne in 1880.

By 1900 industry had, in contrast, established factories and was moving into assembly line operations; had begun to apply, in a crude way, research and development concepts; had introduced the beginnings of modern management; and had developed a sophisticated financial system. Developments had reached such a state that the perceptive Henry Adams, true prophet and seer of technology, foretold the coming of the Age of the Atom and the problems it would bring. In the years to 1950, aided by the acceleration of two wars, technology burgeoned and developed, piled machine upon machine, system upon system, added fantastically to its power resources, and invented the method of invention. Technology transformed American society, philosophy, and art.

During the period from 1900 to 1950, however, technology only washed lightly upon the shores of instruction. In this time span, when high speed printing techniques, radio, sound motion pictures, television, and other pieces of communication technology were invented, developed, and exploited, American education failed to apply these devices in quantity to the instructional process and, of course, failed to develop the appropriate technological systems necessary for this application. There were always rumblings, to be sure, as evidenced by the statement attributed to Edison in 1916 that the motion picture would replace the teacher. However, looked at from the vantage point of 1960, laboratories, project methods, libraries, and minute arrangements for audiovisual materials—the provisions to 1950—

[2] Now called the First Industrial Revolution.
[3] J. W. Oliver, *The History of American Technology*, pp. 298-299.

constituted what was still a pre-industrial technology for instruction.

By 1950 industry had entered what may be called the pre-automation period, which heralded the beginning of a movement toward true automation. Much of the basic work on computers and other control mechanisms had been done. At this time also, mechanical methods for transporting work goods between machines had integrated some production lines into a system called "Detroit automation." The period of true automation was dawning, and I have arbitrarily set 1955 as the date at which the electronic-mechanical systems analysis procedure began to be significantly applied. It is no accident that man began to push toward outer space at about the same time.

By 1950, American education had the potentiality (to carry on with our analogy) of a mass production technology. The hardware—projectors, recorders, television—and the materials were present. The systems concepts—saturation with audiovisual materials at the point of an instructional problem, for example, a concept derived from the military experience of World War II—were developed and known in a few audiovisual circles. A certain amount of incentive and public acceptance, also derived from World War II experience, could be drawn upon. The cake of custom, however, proved to be too tough. The mass production stage, at least 100 years behind industry, was not entered except here and there on isolated little islands.

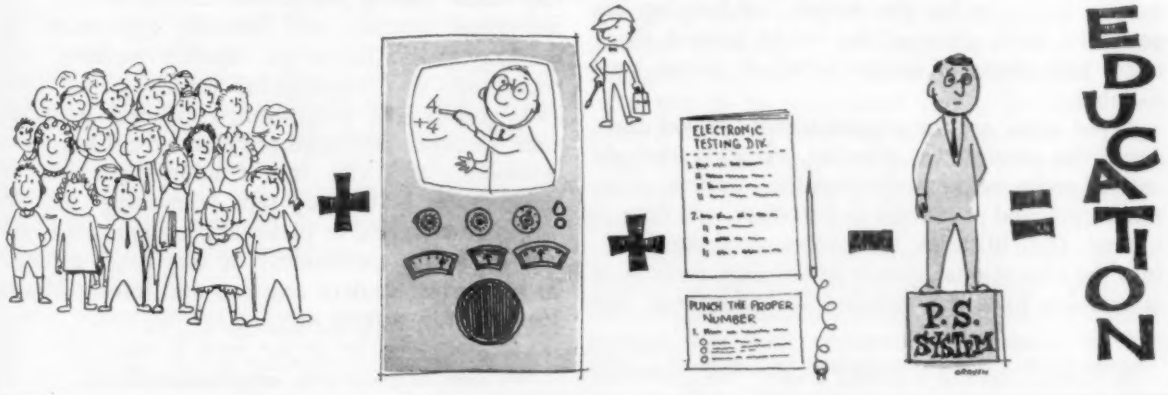
IT was at this point, approximately in 1955, that the god came out of the machine in the form of the Ford Foundation. Dr. Alvin C. Eurich (and a little later his associate, Dr. Alexander J. Stoddard) gave the instructional processes of American education a sharp push into mass production technology. The time was ripe. There was a shortage of teachers; education and educationists were under fire from all sides; Neo-Technocracy was turning its attention to education; the race with Russia was underway; the natives were restless indeed.

There are several interesting facets to this shove into mass instruction technology. First, television, both closed-circuit and broadcast, was chosen as the prime hardware. This was due, I think, to the unconsciously assumed basic concept of *mass production,* usually stated in terms of a shortage of teachers, large classes, and quality instruction. Second, the Ford impetus made provision, for the first time, for a technology of systems to go along with the hardware. Stoddard's own work in designing the school of tomorrow (26) and the work of Trump and his associates in drawing the instructional images of the future for the American secondary school (28) are, essentially, proposed systems.

Third, the Ford group made use of technology in creating the impetus in the first place. The technology of social psychology and public relations was drawn upon; educational decision-makers were the prime targets, and the means used, including high-priced public relations counsel, were the best available. This accounts for the fact that the teaching profession in general and audiovisual specialists in particular—the latter are really the only technologists of the profession—were for the most part left out of this move into technology.

Instead, the foundation went to administrators and board members and influential opinion-makers of all types. Organizations were approached or created; the National Educational Television and Radio Center (now, I believe, related to something called the Learning Resources Institute), the revitalized National Association of Educational Broadcasters, the Educational Facilities

A Formula for Your Future?



Laboratories, Inc., and others. As a sign of this policy to short-circuit the profession, it is significant that, except for a small grant to promote a seminar or two, the Department of Audiovisual Instruction of the National Education Association was left out of the largesse.

The Ford people assumed, I think, that if the cake of custom is to be broken the priesthood is not the agency to break it. This may mean, in part and as far as audiovisual and curriculum people are concerned, that to an outsider their technological orientation is at the level of the water wheel and the handloom, not the computer and the rocket. It is something to think about. On the other hand, it may also mean in part that the Ford Foundation is merely another instrument of Neo-Technocrary and that these actions forecast even more loss of control of education by the existing pre-technological profession.

Impact of Present Trends

With this background of development painted in, we can now come to grips with the impact of the present technology. If we consider education as a societal universe, what happens when we introduce energy into that universe suddenly and on a large scale? That is apparently what is happening.

Two general effects can be predicted by basing our thinking on two analogous concepts. If the concept of entropy holds good in this connection, *the educational system will become more highly organized and less random in nature* (negative entropy will increase); if the laws of social change first stated by William G. Sumner and William F. Ogburn apply, the introduction of a system of technology into the culture will cause *distortions, stresses, and non-predictable effects to increase until a crisis is reached and the culture becomes much different.* Two historical events serve as examples, one taken from Mumford (the introduction of the clock to regulate the habits of monks)[4] and one from Muller (the invention of writing in Egypt for the purpose of keeping accounts).[5] Both changed the world several times over. The effects of neither were, of course, predictable.

What, then, are the present trends? If you don't count the continuous, grinding, sweating struggle carried on by audiovisual specialists, dealers, manufacturers, and producers to introduce, one item at a time, film libraries, projectors, recorders, etc., into the educational system in the slow process of conversion from a pre-industrial technology, two major trends can be identified. These two trends, at the moment, lead in opposite directions.

The first is the trend toward a mass instructional technology and is governed by machines and systems suitable for that purpose. Foremost, of course, is television, of which there are four instructional types: (1) broadcast on an educational channel, (2) broadcast on a commercial channel, (3) closed-circuit of the Hagerstown-Penn State type in which live instructors are used either to supplement instruction or to provide direct instruction exclusive of classroom teachers, and (4) the Compton type in which filmed lectures are distributed via the closed-circuit medium as replacement for classroom teachers. In all cases, the desire is to reach more students with fewer teachers or to obtain "quality" instruction.

Mass instruction technology in another form includes, of course, the massed film systems. The prime example is the EBF series in physics and chemistry, amounting to over 300 half-hour motion pictures intended to be used where there are no science teachers, where there are teachers not considered qualified, as audiovisual aids to more qualified teachers, and with very large groups of students. These films, of course, may theoretically be used over television. The exploitation of the overhead transparency projector is another example of mass instructional technology as shown in the Newton, Massachusetts, experiment in English grammar and composition.

In opposition to this trend of mass instruction is a growing technology for individual instruction. This trend is the audiovisual wave of the future (for the moment). The most dramatic development here is that class of systems and instruments known as teaching machines. Actually, I would class all teaching equipment designed for individual or near-individual operation as being in the category of teaching machines.[6] At present, then, there are approximately five types, listed here on an ascending scale of sophistication: (1) individual reading pacers and similar devices, (2) individual viewing and listening equipment for existing slides, filmstrips, motion pictures, and recordings, (3) language laboratories of all types, (4) specifically programmed printed materials such as scrambled textbooks and the Lumsdaine notebook, and (5) true teaching machines of the Skinner or Pressey type containing carefully worked out verbal or pictorial programs with various ingenious mechanical or electronic arrangements to test student reaction and inform him of his progress, errors, etc.

[4] Lewis Mumford, *The Human Prospect*, pp. 3-9.
[5] H. J. Muller, *The Uses of the Past*, p. 48.

[6] We prefer the generic term, "self-instructional devices."

Extrapolation I

These two major trends towards technologies of mass and of individual instruction are not science fiction; they are with us now. Assessment of this impact is our most pressing and difficult problem. It does not take much of a crystal ball to see that a combination of these two technologies is the next immediate step. For example, let us take Maurice Mitchell's new series for his chemistry course on 150 plus films. Let us further assume that Mr. Mitchell makes a deal with the Rheem Califone Corporation to program their teaching machine with material to go along with the chemistry films. (Mr. Eurich might have to put up the money for the initial effort.) Let us continue by saying we will project the films hourly on the Compton College closed-circuit television film distribution system and place the machines in proper cubbyholes for Compton College students to work at specified times. We could get, almost immediately, to what can be called *total educational automation.*

Or, in another context, let us suppose that the new Ford creation, the Learning Resources Institute, initiates another Continental Classroom in mathematics over national broadcast television; and that new audiovisual teaching machines now being developed are programmed to relate to this new series; and that these machines are placed by the foundation in every public library in America; and that, at the conclusion of the instructional period, students report to designated centers where the Educational Testing Service examines them and certifies them to the colleges of their choice. Think, for a moment, about that one. It is now possibly not only to eliminate the teacher but the school system.[7]

These may be considered extreme applications, but such applications, at least experimentally, are inevitable. In fact, one such study, testing the combination of these two technologies, is now underway. The point is that both the mass instruction system and the technology of individual instruction—teaching machines—are getting terrific momentum. These technologies are going to hit education with a million-pound thrust. What will be the effect upon our educational society? What is the role of the teacher, the audiovisual specialist, the curriculum director? *Quo vadis* the curriculum itself? This last question is particularly pertinent if the medium or image governs the message, as McLuhan maintains.

[7] *Time* magazine had some fun lifting this sentence out of context. See the March 14 issue, p. 68. *Time* also said: "Finn offered one caveat: this awesome equipment must not fall into the hands of any one private institution, e.g., the Ford Foundation. Said he, 'The American people don't elect representatives to the Ford Foundation.' "

Extrapolation II

Technology never sits still. The extrapolations given in the last section are immediate. What of those that can be made for a time slightly farther into the future? I see several developments. First, it is reasonable to expect that programming for teaching machines will move from the verbal-Socratic-Skinner type to the audiovisual-branching type. That is, the machines will present conceptual content based upon student pretests, using films, slides, filmstrips, tapes, and/or video tape as the medium. The presentation sequences will be longer and the student will be given an opportunity to select additional sequences for further explanation if the machine, through testing, informs him that he needs it. Records, of course, will be maintained instantaneously by miniaturized computers

Secondly, the work in England of Ashby, Pask, and others with teaching machines based on the design concepts of biological computers will affect the technology of the present teaching machine much as transactional psychology affects stimulus-response psychology. Pask has already produced a machine which, in training key punch operators, actually senses the characteristics of the student as he works and automatically adjusts the program of the machine to the student's individual needs. This is a pure transaction, and Pask maintains he can develop such a machine to teach decision-making with present hardware and know-how (18).

A second development of the future begins next year with the strato-vision experiment of the Ford Foundation over a city in Indiana. News of this experiment is gradually filtering into educational circles and has appeared here and there in the press. Circling overhead, one or more airplanes carrying multiple television transmitters can broadcast signals over much greater distance than conventional tower transmission. The programs will go into several states and, because of the location, into both urban and rural areas and into innumerable heretofore independent school districts. Effects of this on local control of curricula, curriculum planning procedures, images of master teachers, patterns of school organization, etc., have yet to be speculated about, let alone explored. Nothing technical would prevent, by the way, a national network of such aircraft as an addition to our other national means of transmission.

A third predicted development is based on information that it is technically possible, although not yet economically feasible, to produce a motion picture film with characteristics similar to the Polaroid film that is instantaneously developable.

What this would do to videotape, to production techniques, and to the possibilities of local production of materials is of great interest to the audiovisual field.[8]

The fourth development that can be anticipated is the most spectacular. Essentially, it is based on a systems concept. It is theoretically possible now to design an automatic classroom under the control of the teacher. Most of the elements are present or can be designed. Such a classroom would have total light and air control, automatic projection and television systems, technical provision for the best possible discussion environments, display situations, etc., which could be changed at will. By planned programming, the classroom could be made to function for major presentations, small group discussions, individual work at teaching machines, creative periods, and the like. As we said, all of this *could be* under the control of the teacher. The classroom then would become the teaching machine. Adrian TerLouw at Eastman Kodak has done some work in this area and it is, of course, implied in the provocative article by Simon Ramo which is so often cited in discussions of teaching machines (23). An acquaintance of mine refers to this concept as the "mad scientist" classroom.

TO assess the implications of this current and predicted impact of technology on the instructional process is not easy. As with any such speculation, it is also hazardous. It is, however, a job we must attempt.

We have to start, I think, with the proposition that our educational society is in the position of a backward or underdeveloped culture suddenly assailed by the 20th-century engineer. In addition, reactions in some professional circles to the advent of television are similar to those factory workers of the 19th century who attempted to destroy the machines that were taking over their jobs. In the long run, the machines remained; instructional technology is, no doubt, here to stay. Our problem becomes one not so much of how to live with it on some kind of feather-bedding basis as how to control it so that the proper objectives of education may be served and the human being remain central in the process.

Certain things are obvious. I think the concept of negative entropy[9] will hold. The thrust and energy of technology will force a greater organization upon us at every point *at which it is applied to instruction*. Such an arrangement as the stratovision experiment will require a tighter and different organization in those five or six states and in those many school districts of the Midwest. The closed-circuit experiment just beginning in Anaheim, California, is already, it seems to me, making requirements for organization—of scope and sequence in the curriculum, of the district itself, and of the nature of the television presentations—the rigor of which has never been felt before in Anaheim.

Programming, in its machine, computer, and automation sense, is a matter of extreme organization—the piling up of energy.[10] Most of the devices and systems of the new technology require, one way or another, this type of programming—television, teaching machines, mass films, language laboratories. This means that programmers are needed. Who is to do this? This is essentially, in the old sense, both a curriculum and an audiovisual problem. It is also a social problem. The heartland is programming. He who controls the programming heartland controls the educational system. Will it be a foundation, a committee of scientists, textbook publishers and film producers, the NEA, the school superintendent, the board of education, the students, or the general public?

Too, how many of us will stay on board the old ship and sink with the concepts being absorbed or outmoded and tossed to the sharks by the new technology? Take the concept of instructional materials which some curriculum specialists love so well and which caused quite a controversy in DAVI circles a few years ago. The fight was futile, as is the love. The concept of programming and the systems and systems analysis it implies completely absorbs the idea of materials. Instructional materials becomes an outmoded, atomistic, pre-technological concept useful mainly to the historians of education.[11]

The concept of audiovisual education may accompany instructional materials down the drain, or it may not, depending on whether or not it can be redefined acceptably.[12] The Skinner and Pressey type teaching machines and their descendants are, for example, primarily verbal devices, and yet their management and programming as technical electronic devices belongs somewhere. At a practical level, within a school situation, someone is going to have to worry about them. It is my position that the audiovisual field is in

[8] The new thermo-plastic method of image-recording developed by General Electric can do much the same thing.

[9] In all the tests I have been able to think of, this concept holds. I am almost convinced that this idea can achieve some status as, forgive me, "Finn's Law."

[10] The role of energy in relation to AV communication theory needs much study. For example, the energy involved in the negative entropy concept should be examined in much the same way that Cottrell studied energy in general in *Energy and Society*.

[11] McLuhan maintains the same thing about audiovisual aids (14).

[12] Redefinition is the subject of a paper now at press.

the easiest position to help integrate these mechanisms properly into the instructional process. They are not primarily audiovisual; they are primarily technological. The AV field, I think, must now suddenly grow up. We, the audiovisual specialists, are, of all educational personnel, the closest to technology now; we have, I think, to become specialists in *learning technology*—and that's how I would redefine audiovisual education.

What of the curriculum people? Their work is just beginning. It can become infinitely more rigorous and at the same time more satisfying. I suspect some of the emotional Rousseauans will have to get out of the curriculum business. The rest can step in and face this problem of programming a learning technology in human terms and find great excitement and reward. The profession as a whole must be made to sense this powerful movement to instructional technology and be made ready to seize the great opportunity it offers to make *all* teachers highly professional.

The Philosophy of Adventure

In closing, I should like to quote Whitehead, who said that it is the business of the future to be dangerous. Technology certainly has made this aphorism into the outstanding fact of our time. Technology is now making the future of instruction capricious and hazardous. But in doing so it has presented us with more opportunity and more choices than ever before. If the future is an adventure, it is an adventure *because* of technology. The cost of civilization is the fact that we can make wrong choices because of the alternatives technology presents. The reward of civilization is the freedom provided by technology and the opportunity to make the right choices. This cost and this reward we now face with the technology of the instructional process. We *must* look forward to the adventure and not present what Herbert Muller noted as the "curious spectacle of civilized man forever marching with his face turned backward—as no doubt the cave man looked back to the good old days when men were free to roam instead of being stuck in a damn hole in the ground."[13] The "good old days" are gone; approached with intelligence and zest, the days of the future will be better.

[13] Muller, *op. cit.*, p. 65.

► A book containing this and other pertinent materials will be available from the Department of Audio-Visual Instruction, NEA, in early June. Edited by A. A. Lumsdaine and Robert Glaser, it is titled *Teaching Machines and Programmed Learning*. Price $4.50.

BIBLIOGRAPHY

These references are highly selective. The emphasis has been placed on teaching machines because it is assumed that most readers are familiar with the basic audiovisual literature and with the large and growing literature on educational television. Enough of the latter has been included to provide both a sample and a working base.

1. *Automated Teaching Bulletin,* Vol. 1, No. 1, September 1959. South Gate, California: Rheem Califone Corporation.

2. Bissex, Henry S., *For Instance Number 1.* Holyoke, Massachusetts: The Tecnifax Corporation, 1958.

3. Burns, John L., *Communications and Education.* Radio Corporation of America, Camden, New Jersey, 1958. (Reprint of a speech delivered before the National School Boards Association, 1958.)

4. Corrigan, Robert E., *Automated Teaching Methods: A Solution to Our Educational Problems,* speech published by the Rheem Califone Corporation, South Gate, California, October 1959.

5. Earnest, Ernest, "Must the TV Technicians Take Over?" *American Association of University Professors Bulletin 44:3,* 582-88, September 1958.

6. Eurich, Alvin C., "Better Instruction with Fewer Teachers," *Current Issues in Higher Education, 1956.* Washington, D. C.: Association for Higher Education, NEA, pp. 10-16.

7. Finn, James D., "Automation and Education: I. General Aspects," *Audio-Visual Communication Review 5:1,* 343-60, Winter 1957.

8. Finn, James D., "Automation and Education: II. Automatizing the Classroom—Background of the Effort," *Audio-Visual Communication Review 5:2,* 451-67, Spring 1957.

9. Finn, James D., "From Slate to Automation," *Audio-Visual Instruction 4:3,* 84-85, 100-101, March 1959.

10. Finn, James D., "A Look at the Future of Audio-Visual Communication," *Audio-Visual Communication Review 3:4,* 244-56, Fall 1955.

11. Galanter, Eugene, *Automatic Teaching: The State of the Art.* New York: John Wiley and Son, 1959.

12. Henning, Gordon, *Meeting the Teacher Shortage,* paper published by the Technical Military Planning Operation, General Electric Company, Santa Barbara, California, February 1957.

13. Lumsdaine, A. A., "Teaching Machines and Self-Instructional Materials," *Audio-Visual Communication Review 7:3,* 163-81, Summer 1959.

14. McLuhan, Marshall, "What Fundamental Changes Are Foreshadowed in the Prevailing Patterns of Educational Organization and Methods of Instruction by the Revolution in Electronics?" *Current Issues in Higher Education,* 1959. Washington, D. C.: Association for Higher Education, NEA, pp. 176-82.

15. Miller, Neal, and others, *Graphic Communication and the Crisis in Education.* Washington, D. C.: Department of Audio-Visual Instruction, NEA. (Published as Vol. 5, No. 3 of the *Audio-Visual Communication Review,* 1957.)

16. Mitchell, Maurice B., *Education—A New Era Begins,* speech published by the Encyclopedia Britannica Films, Chicago, Illinois, May 1958.

17. National Education Association, Department of Audio-Visual Instruction, *Television in Instruction: An Appraisal.* Washington, D. C.: The Department, 1958.

18. Pask, Gordon, "Electronic Keyboard Teaching

Machines," *Education and Commerce* 24:16-26, July 1958.

19. Pask, Gordon, "The Teaching Machine," *The Overseas Engineer*, February 1959, pp. 231-32.

20. Pask, Gordon, "A Teaching Machine for Radar Training," *Automation Progress*, May 1957, pp. 214-17.

21. Pask, Gordon, "Tomorrow's Control Systems Can Learn from Experience," *Automation Progress*, February 1959, pp. 44-47.

22. Porter, D. A., "A Critical Review of a Portion of the Literature on Teaching Devices," *Harvard Educational Review* 26:126-47, Spring 1957.

23. Ramo, Simon, "A New Technique of Education," *Engineering and Science* 21:17-22, Spring 1957.

24. Raymond, R. C., *The Need for Labor-Saving Machinery in Education*, speech published by the Technical Military Planning Operation, General Electric Company, Santa Barbara, California, February 1957.

25. Skinner, B. F., "Teaching Machines," *Science* 128:3330, 969-77, October 24, 1958.

26. Stoddard, Alexander J., *Schools for Tomorrow*. New York: The Fund for the Advancement of Education, 1957.

27. *Teaching by Television*. New York: The Ford Foundation, 1959.

28. Trump, J. Lloyd, *Images of the Future*. Washington, D. C.: National Association of Secondary-School Principals, NEA, 1959. 48 pp.

Complete Organization of Airborne TV Network in Midwest

► Eighteen areas in six Midwest states—each with a major college or university as its hub—have been designated as a communications network for the new Midwest Program on Airborne Television Instruction (see November, 1959, KAPPAN).

MPATI plans to beam instructional telecasts from an aircraft to schools in the six states, starting in February, 1961. The $7 million project is supported by the Ford Foundation and contributions from private industry.

In a 32-page brochure just released, MPATI indicates that it will administer the program through eighteen area committees blanketing the multi-state telecast region. Working with area coordinators, these committees will consist of school and university administrators, educational TV representatives, and lay leaders to provide liaison between MPATI and surrounding schools and colleges interested in participating in the airborne program.

The eighteen colleges and universities which will serve as "resource institutions" are: Illinois—Northern Illinois University, Northwestern, and the University of Illinois; Indiana—Ball State Teachers College, Butler University, Indiana State Teachers College, Notre Dame, and Purdue; Kentucky—University of Kentucky and University of Louisville; Michigan—Michigan State University, Wayne State University, and Western Michigan University; Ohio—Bowling Green State University, Miami University, and Ohio State University; Wisconsin—University of Wisconsin at Milwaukee.

The brochure lists a tentative schedule of courses to be beamed to schools within the 150- to 200-mile radius of the airborne transmitters. Ranging from elementary level through college, they include such topics as foreign languages, science, arithmetic, music, social studies, art, the humanities, and international relations.

The courses will be prepared at Purdue University in a summer-long workshop for selected TV teachers and related specialists. They will then be recorded on video tape at designated educational television stations.

The brochure contains a section of special information for the schools, advising them on how they can participate, what kinds of receiving equipment they will need, and how much it will cost.

Teaching Machines for $3

► Do-it-yourself teaching machines are feasible—and cheap.

A Michigan State University woodworking class proved this with a recent exhibit of thirty class-made teaching machines which cost about $3 each for materials. They were ranged alongside commercial models, including an electronic type that costs $3,000 to $5,000.

Lee Smalley, class instructor, said that while the machines show the possibility of making similar but more practical machines on a "do-it-yourself" basis, they were chiefly valuable because they taught teaching machine principles.

Teachers Would Go It Alone

► In its first use of a new opinion-sampling technique, the National Education Association found that only one out of six teachers would prefer large classes with a full-time clerical aide over small classes without such an aide.

The question: Do you think you could teach more effectively if: (1) you taught classes of 40 to 50, with assistance from a full-time clerical aide, or (2) classes were limited to 25 to 30 pupils, with teachers doing the usual clerical work?

The response overwhelmingly favored the second alternative. Among elementary teachers the ratio was 11 to one in favor.

The Japanese NDEA?

► The Japanese government is considering a subsidy for purchase of audio visual aids and other useful equipment to help Japanese secondary schools improve their teaching of English. Japan already has national subsidies to purchase equipment for teaching science.

DEMOGRAPHY and EDUCATION

In this two-part article, a sociologist and an educator outline significant demographic movements in the U. S. and their implications for public education. The conclusion: "Education . . . faces the most exciting years of its existence, with just enough problems for all.

I. Variability and Convergence In the American Population

By **N. B. RYDER**

THE title of this paper comes from an attempt to identify what may be the two most significant facts about the demography of the United States today.

The first is the gradual involvement of different sectors of the society in the consequences of the massive fertility fluctuation of the past generation. The writer examines the shape of the population now, predicts what it will be twenty years from now, and describes how we got this way. This seems to be a highly appropriate task in the year of the decennial inventory. Then the consequences of changing irregularities in the age structure are considered for such major population components as students, workers, and dependents.

The second major fact (or proposition, if you prefer) is that we are becoming remarkably more and more alike. Evidence is presented concerning this convergence, this trend toward greater similarity in virtually every major characteristic of the members of our population. The paper concludes with an interpretation of this dramatic and little-recognized process.

MR. RYDER *is professor of sociology, University of Wisconsin. This paper and the response which follows were presented in essentially the same form at the national convention of the NEA Department of Elementary School Principals in St. Louis, March 26-30, 1960.*

I. Demography of Contemporary America

The first and most significant fact about the population of the United States in the next twenty years is its potential for growth. In the census this year some 180 million people have been counted. If present developments are any guide, this number will rise by 1980 to a quarter of a billion. The interest of the present paper is, however, in a less well-reported aspect of this growth, viz., the way in which it will be highly differential by age. In the next two decades the total population will increase by one-third, but young adults and old people will increase by more than a half. Those below age 15 will increase in numbers by about the same or even a little less than the rate for the total population. Meanwhile, the age group from 35 to 54, in some ways the leaders of our society, will hardly increase at all. This set of facts—a small population in childhood, a very large one in early manhood, a very small one in mature adulthood, and a very large population again in the older ages, constitutes a fluctuation.

the peak and trough of which move up through the age structure, causing new problems of shortage and excess to different parts of the society in turn. The process can be described graphically, albeit crudely, as looking like a boa constrictor swallowing a pig.

The explanation of this age-by-age fluctuation is fairly straightforward. It is caused by changing numbers of births from year to year. The birth crop rose in the postwar period after having fallen for a long time. The earlier decline as well as the subsequent rise share joint responsibility for our demographic difficulties. The reason the young adult group is going to swell so much in numbers between now and 1980 is only partly because of those large hordes moving up from childhood. The other part of the story is that there are currently such small numbers in their twenties—because they are the descendants of the depression. This is of high relevance for members of the teaching profession. The universities are about to face the onslaught of numbers that the elementary schools and high schools have been coping with, one way or another, for a long time; and the problem must be solved with a reduced supply of teachers. The principal reason for the small numbers of teachers relative to students is, trite but true, that teachers tend to be older than students, and therefore were born at an earlier period of smaller birth crops. The demand is up and the supply is down, and both sides of the situation aggravate the problem.

It is probably worthwhile to make a few comments about the reasons for the rise in births. Interpretations in the popular press have suggested that there has been an increase in the love of children, or a return to old-fashioned family values, or even a new fad of bearing children, comparable to the change in Paris styles. But much more cogent and supportable is the mundane explanation that we are having more babies now principally because we can now afford them, whereas we couldn't before. The actual change in American childbearing is not, in any event, a return of the large family. If the records are examined carefully, it will be seen that most of the increase in fertility results from two related facts: 1) A lot of people used to stay unmarried, or, if they got married, usually after some delay, they had no children or only one. 2) Nowadays almost everybody gets married and has at least two children. Big families are scarcer now than they ever were, but many more parents are contributing to the total.

Another factor which elevates the birth rate year by year is that people are now having babies somewhat earlier in their lives than they used to. This is the same sort of process of apparent expansion as that which occurs when the age of entry into elementary school is lowered. During the time of change, enrollment swells in the lowest grades. Now the moral of this brief history for our future is that we, as a society, are almost all of us regulating our fertility in accordance with the shape of the world as we see it. We have proven ourselves to be highly responsive to shifts in the economic and political climate. If bad times come, we can, so to speak, turn off the tap, and then, when good times return, turn it back on. The variability which this induces seems likely to be a permanent feature of the society of tomorrow.

II. The Consequences of Fluctuation

Whatever the causes, the fact of our rapid growth is clear. No less important, the various parts of our social anatomy are growing at vastly different rates. This theme is worth pursuing for several especially important parts of the body politic. First, there is the population of students at various levels. On the basis of plausible forecasts it appears that, just because of increasing numbers, the proportional rise in the next twenty years will be 40 per cent for elementary schools, 60 per cent for high schools, and 80 per cent for colleges. But these guesses are based on the obviously incorrect assumption that there will be no rise in the amount of education achieved by the average person. If estimates for this factor are introduced, the forecasts show rises of 40 per cent for elementary schools, 80 per cent for high schools, and 120 per cent for colleges. The reason for such differences in relative growth is that the elementary school enrollment is already vast—it has already had its explosion—while the university, at the other end of the educational process, is still teaching those relatively small numbers of depression babies, and waiting uneasily for the inevitable avalanche. Coupled with this circumstance is the obvious point that any increases in the amount of education per person show up in the later school years.

The question immediately arises, Who is going to pay for all this education? Without entering at all into a discussion of sources of financing by various levels of government, it can readily be asserted that this expenditure, like all others, is to be borne by the labor force. The producing members of our population will increase by 35 per cent between now and 1980, but the people their incomes support will increase by some 40 per cent. This doesn't look on the face of it like

more than a small handicap, but the situation takes on more gravity when the composition of the coming labor force is examined—because it is going to get younger and older simultaneously. What is meant by this apparent paradox is that the youngest workers are going to increase in numbers by a very large amount, and so are the oldest workers, but the core of the labor force, those who have acquired enough experience to be really useful but are not yet succumbing to declining energies, will hardly increase at all. In fact, there will actually be fewer people in their forties in 1980 than there are now. This circumstance seems likely to be highly prejudicial to productivity, all other things being equal. Moreover, the increase in the size of the labor force will be achieved in disproportionate measure by the addition of more and more women. Unchivalrous as it may sound, this is also likely to reduce productivity.

The final observation in this section can be stated briefly and bluntly, although the solution will be long and hard: our population in retirement, those who have left the labor force for old age, will increase at twice the rate of the total population. Some way must be found to cope with this underprivileged minority's difficulties before its very numerical magnitude swamps us and them.

In summary, then, a decline in births, followed by a rise, has made a vast dent and bulge in the side of the age pyramid, which will continue to plague us in various ways: by overwhelming increases in enrollments in the higher grades of our school system; by a labor force which is deficient in its most productive members; and by an expansion in the relative numbers of the aged. These problems of a variable rate of growth by age originate in the effectiveness with which prospective parents can respond to disturbances of the social, economic, and political climate. If our national future is one of instability in these climates, then we must expect a perpetuation of the kind of problem sketched here.

III. Convergence in American Society

The second theme of this paper is convergence. The major trends in our population are by now quite familiar. We are living longer, getting married earlier, having our children sooner and more often. We are getting more schooling, moving off of the farms, getting higher wages and salaries, and moving out to the suburbs. In the present paper, attention is shifted away from these well-known developments and toward an associated process, which is an important component of national development and too little noticed, considering its significant implications. Simply said, the point is that we are becoming more and more like one another all the time, more and more homogeneous as a society, more and more similar in big and little ways.

American history is that of a nation of wide differences by race, by religion, and by ethnic group. The outstanding episodes of that history have been conflicts between different kinds of people. Even today the news headlines are principally concerned with the consequences of differences: the education of white and Negro; the religions of presidential candidates; the economic struggles of workers and employers. Nevertheless, persistently and in every way measurable, our peoples are converging on a common way of life.

Consider first the events of most importance in our personal lives. More and more we are getting married at a similar (early) age, and having our children in the same first few years of married life. Very few now delay marriage beyond the early twenties, or childbearing beyond the early thirties. Husbands and wives are now much less different in age than they used to be, and indeed parents and children are closer together in age. The proportion who deviate by not marrying is becoming smaller and smaller. As noted before, the families are more and more likely to contain between two and four children. The childless couple is becoming a rarity. And at the other end of life, we are tending to die at more and more similar ages. Death before old age is now a relatively infrequent tragedy.

When we turn to those pieces of information about a person which are used to rank him, we find the same story. Differences in educational level are gradually diminishing. As the income level has gone up, major differences in economic well-being have been markedly reduced. Even the sizes of our homes are becoming more alike, with fewer and fewer in the sizes of less than four or more than seven rooms. Consider too the more vaguely defined differences by social class. As well as the inference (which seems perfectly valid) that social class differences tend to disappear along with differences in income and education, there are non-quantitative observations to the same effect by many shrewd observers of the social scene. Perhaps at first glance the status-seeker appears to be an exception to this idea, because he is trying to widen some kinds of difference. But, since we all appear to be status-seekers in one way or another, this fact merely helps to prove the thesis of similarity. It is indeed extraordinary how much commonality there is in our styles of

life—in recreation, in house design, in automobiles, in televiewing, and in topics of conversation.

The contrast between past and present is equally striking in terms of where we live. It used to be that the population was sharply split between those who lived in sparsely settled rural areas and those in dense city concentrations. But now the farm population has been dwindling for some time, and will continue to do so; more and more farmers also have city jobs; and the urban ways of living have been exported out to the farm. Meanwhile the urbanites are fleeing the city. The centers of our big metropolitan areas have pretty well stopped growing, and the city-dweller is transformed into a suburban commuter, with a setting as rural as he can afford. One other way in which the country and the city are merging is that we don't actually live in one place any more. We are the most mobile people ever to have lived on this planet, and our constant peregrinations are a profound eraser of regional differences and provincial attitudes.

The final category of evidence considered is that relating to certain divisive elements in our past and present: birthplace, religion, and race. The proportion of foreign-born was not long ago one out of seven; it is now down to one out of sixteen, and will continue to decline. Our immigration policy is explicitly aimed at homogenization, by reducing the numbers of those who are most different from us. In the sphere of religion, data are hard to come by, because of the sensitivity of the subject; but the evidence that does exist is highly convincing testimony for the thesis of disappearing differentiation. For example, the sharpest split between Protestants and Roman Catholics is supposed to be in attitudes toward fertility and its regulation, yet the average sizes of families of these two religious groupings are now almost the same. Socially, economically, and politically, it is becoming more and more the case that the most significant observation one can make about Protestants and Roman Catholics in the United States is that they are both predominantly American in their behavior.

The final and largest schism in American life is that between white and Negro. Nothing said here should be taken as minimizing the deplorable disadvantages facing those citizens of our nation who have had the misfortune to be born to one set of parents rather than another. Nevertheless, it is a fact that the gap is narrowing slowly but surely. For example, in the past twenty years the proportion of young people enrolled in school went from eighty to ninety per cent for whites, but from seventy to nearly ninety per cent for Negroes. Occupationally there has been some progress toward less different distributions of these two groups among society's modes of work. The age at marriage and the average number of children borne is now more similar than it was. The regional location of white and Negro has always been very different, with the Negro centered in the rural south, and the white in the urban north. Now every day the Negro is moving toward a geographical distribution more like that of the rest of the population. A final striking piece of evidence is in comparative health, as reflected in length of life. In the past generation the difference between white and Negro in this respect has been reduced from fourteen to seven years.

IV. The Implications of Convergence

There is, as suggested above, overwhelming evidence that the American people are converging gradually on a common identity. It deserves emphasis that in every case this is convergence upward, so to speak, by the progressive elimination of the very poor, the very ignorant, the very unhealthy, and indeed all those who deviate from the norm in ways that are undesirable. What is the explanation for this convergence? Part of it is unquestionably that we are exposed to more and more influences in common by way of the mass communications media, and, most important, by universal education. Part of the explanation is also inherent in the very process of social change. In the movement toward a better way of life, some groups will be in the lead, and the gap will widen for a while, but then the others will take up the march, and the differences will narrow again. Another piece of the explanation is that we hold it immoral that, in any society as rich as ours, there should still be poverty. And so we share our bounty with the less fortunate. But most of all the narrowing differentials represent the disappearance of inequality of opportunity. As we are more and more given the same start in life, the differences between our careers become less, because we are, after all, very similar to one another. The basic differences in our capacities never were as great as the differences in our fortunes—they had to be exaggerated by privilege.

What, then, are the consequences of the convergence reported here? First of all, it would seem to make a very valuable contribution to the rising scale of living. This is true in two ways: the poverty and ignorance of some are costly to all; and wide differences among us are also costly. These expensive barriers to progress are not as

formidable as they once were. In the second place, something should be said about the stake of individualism in this development. A lot of people are concerned about lonely crowds, and organization men, and mass society, and the trend toward conformity. The writer believes the essence of individualism to be not the existence of differences but the right and opportunity to be different. The distinctions that used to be so pronounced were not manifestations of individuality in any event—they were differences between groups. The label of a group, attached to a man throughout his life, is a most pernicious destroyer of individuality. Indispensable to any concept of individual freedom is the removal of the handicaps and fetters of discrimination and poverty, and the opening of the horizons of possibility to all. Individual liberty is indivisible. The more people there are who have the opportunity to behave as individuals, the greater freedom every one of us has. There is no better insurance policy for freedom for all individuals than the systematic erosion of debilitating differences. The facts about convergence reported here are statistics in which we can take pride, because they are an essential component of the evolution of democratic society.

II. Implications of Demographic Changes for Education

By **DONALD R. THOMAS**

INFORMATION on rising school populations coupled with dwindling teacher supplies and overburdened tax sources no longer startles schoolmen. It is consequently difficult to dramatize the magnitude of the demographic changes Dr. Ryder has described and to focus urgent attention upon the tremendous impact such changes will have on an already reeling educational world. Merely to announce that in the next twenty years total school enrollments will double ought to supply any group with an adequate number of anxieties and crises to discuss. But such a proclamation as this is like a stone dropped into a pond. We would be negligent to dwell upon the splash alone. While we cannot pursue every significant ripple here, we must at least discuss the main currents and note their effect on every part of the educational enterprise.

The first question an educator asks when he hears of rising school populations is, "Where is the extra money coming from?" When he notes, however, that *elementary* enrollments are only going to increase 40 per cent over twenty years, he may ask, "Is the problem as serious or desperate as has been claimed?" The answer, of course, is "Yes, it is." Because, at the same time, secondary school enrollments will double that 40 per cent to 80 per cent and college enrollments should jump three times 40 per cent. Unfortunately, we are competing at all levels for the same tax dollar. And if it is true that high-school and college installations and programs are inherently more complex and expensive than their elementary education counterparts, then the outcome of the struggle for the tax dollar seems rigged and we are in for some lean and hungry days.

Of course, all competitors would be happy if they could simply increase the supply of tax dollars so that there would be ample money for all. But Dr. Ryder has raised certain questions which imply serious doubts about securing such massive injections of new support funds. For example, if there is an increasing number of old people in the general population, there is an automatic increase in the number of people living on fixed retirement incomes, and it is their natural economic interest to be in opposition to increased taxes, increased bonded indebtedness, or any other encroachment upon their *non-expandable* means of support. Such senior citizens must also protect the tax dollar which supports their social security and old age benefits. On the other end of the scale, we are told, there is an increasing number of young people who have not yet achieved their maximum tax-paying ability—even though they have apparently achieved maximum fertility. Thus we have in the middle the most able taxpayers, but they are fewest in number.

Then where will increased financial support come from? Certainly the local property taxpayer

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is feeling the impact of this bimodal age distribution already and there are indications that he is getting increasingly restless under his burden. We are forced then to look to the state and federal governments, which depend largely upon other kinds of taxation for their income.

Rural Political Power

But here we are faced with another kind of problem. Present representation in the state legislatures and in the national Congress fails adequately to reflect the well-known rural-urban population shift. Thus traditionally conservative rural areas, with declining populations and in some cases a consequent *surplus* of school facilities, are disproportionately represented in the legislative bodies which are being asked to come to the aid of what may be called our increasingly urban-oriented education.

In the cities the urban-suburban movement has caused a tremendous inequality in the tax base. The assessed valuation sits in the city and the children play in the suburbs.

Again, as rural areas find it more difficult to persuade urban teachers to reverse the direction of the rural-urban shift and teach in the country, they have been pushing and may continue to push for a lowering of standards for entrance into teaching in order to solve their shortages. At the same time, the urban education-conscious populations are demanding even higher teacher certification requirements. The natural interests of these groups seem to pull them in opposite directions.

To some, the solution to the financial support problem is simple. They say, "Abandon mass education because it is too expensive" and "educate only the gifted few." But Dr. Ryder has suggested and most of us will agree that the need and the drive in America is for more education for more people if we are to meet the challenges of the space age, achieve a growing national economy, and fulfill our democratic goal of equal opportunity for all. Any action to reverse this trend would not only be contrary to the American dream but suicidal for a complex technological society. The public school curriculum of today ceases then to be conceived of as *terminal* education; rather, it must be seen as the mere beginning point in a lifetime of learning spread out over time and space to meet new and ever-emerging needs and pressures.

The implications of this need for continued learning must be examined in the light of yet another demographic change if we are truly to understand the task that lies ahead. Dr. Ryder has told us of the increased *mobility* of the population at all levels of society, and we have already referred to the major rural-to-urban and urban-suburban shifts. We cannot underestimate the importance of this restless movement of the population. Remember, an average of one out of every four school children will move each year. Many will move more than once, and many will move great distances. In one county in California, for example, a 1953 survey indicated that over 60 per cent of the population had lived in a different house in the previous year.

Such information presents education with some of its most unique curriculum problems. How does a mobile population get continuity in learning if that learning is extended over such a span of time and space? What happens, to take just one kind of example, to the usual grouping practice of schools? Do we departmentalize for greater content strength to meet the quality challenge? Or do we maintain the self-contained classroom because of its alleged contribution to the stability and mental health of both teachers and pupils? As families scatter themselves throughout the land, what changes and adjustments are implied for the family and for the schools which receive these semi-nomads? Can American education, *a la* the Rockefeller Report, pursue excellence when it almost literally has to pursue *its student body* over the length and breadth of the land? If 25 per cent of each growing class can be expected to move each year, doesn't the public school curriculum have to become increasingly more *flexible* if it intends to meet these kinds of emerging and changing needs of the population?

A Curriculum for Stability, Too

Paradoxically, the factors of mobility and other such demographic changes also point to a need for the school curriculum to supply some basic element of stability to the society. As a society becomes more complex, and as urban living and mobility increase, we witness a breaking down of tradition-built formal and informal behavior controls. Individual responsibility and accountability get lost in the crowd, and the moral and ethical education of our future citizens is subjected to additional stresses and strains. While the individual may now have greater freedom from restraints on his behavior than formerly, he may at the same time rob the nation of some important kinds of civic responsibility it needs in order to survive as a democracy. In other words, getting lost in the crowd removes some kinds of community commitment that our democratic system needs. And also in that crowd are children who, psychologically speaking, find it difficult to form those deep

inter-personal attachments necessary to stable personalities, because everywhere and always they must meet new faces and places with varying sets of expectations enforced in varying degrees.

How, then, does the school tightrope between the need for flexibility on the one hand and stability on the other? How does the school arrange a quality program for a swelling, mobile population?

These questions and conclusions may seem contradictory to Dr. Ryder's optimistic appraisal of the implications of the *convergence* factors he sees operating in the demographic changes we have been discussing. He has told us that we are becoming more and more alike in many important ways, and that this is basically a good thing. But others say that unless steps are taken at once we are in danger of losing our precious individuality. The mass media are telling us (with remarkable uniformity) that we are a nation of conformists. We even find the mass media themselves being uniformly accused of having caused such an undesirable state of conformity. How is it possible to reconcile convergence with what we have described as splintering disintegration? We must first propose an image of our society as a restless, lonely crowd, seeking status and security in symbols and organizations. When we have accepted this image, nothing that Whyte or Reisman or Packard have said seems at all contradictory. The legitimacy of their claims is understandable in the light of the pressure of interdependence meeting the isolation of specialization. And as with so many complex social problems for which no one else wants to accept responsibility, you may be sure that we, in the schools, will find this one dumped unceremoniously in our laps.

Missing: A Hierarchy of Values

Actually, we already possess an answer. Over the years, the schools have been forced by the age of specialization to offer the most comprehensive, individual-oriented educational program ever attempted by any nation. And paralleling this all-encompassing school program is an array of leisure-time pursuits so diversified that the individual is almost overwhelmed by the extent of choices offered him, particularly in large urban areas. But the missing element in all of this (which may very well account for the frightening amount of conformity) is the absence of any hierarchy of values to impose upon individual choices. Without such a hierarchy equality can go berserk. Every school subject, every recreational activity, may be assumed to possess equal value. Every school child is assumed to be intellectually equal and deserving of absolutely equal treatment, as is every social value. Lacking any hierarchy of values, we could abandon the very essence of value which, by definition, implies the placing of one thing above another. In values and with people, we could lose the individual's worth until we have truly produced a kind of amoral conformity.

The Care and Feeding of Differences

Thus the challenge facing the schools is to erect and maintain some acceptable priority of basic social values and finally, once and for all, recognize and cater to those individual differences to which we have paid lip service for so many years. Flexibility in the curriculum is then a call to comprehend individual differences and to construct a curriculum and a body of pedagogical techniques which first and foremost are concerned with the care and feeding of differences. To accomplish this, it may be necessary to re-examine our entire body of professional procedures to check their validity. What about the teacher teams? What about the use of television teaching? What serves the end of individual differences best? What about the standardization of textbooks? What about the extensive use of teaching machines? Will we have enough teachers to maintain our past patterns of grouping? What serves the cause of the individual best? What about the line-staff organization of schools? Does this serve individualization of teaching talents? Many a sacred cow will have to be prodded, poked, examined, and discussed, and some may have to be led away to the slaughterhouse or the museum.

Supplying stability to the curriculum consists, on the other hand, of giving assurance that in some as yet undiscovered way a consensus hierarchy of moral and ethical values will be erected which will offer a measure of security and common cultural affiliation to all individuals without violating the essential uniqueness of each. This alone is a mighty task, fit for real leaders in a truly democratic society.

Place this series of challenges in the context of the staggering increases in enrollments, the growing shortage of teachers, the unparalleled competition for the tax dollar, and a fantastically mobile population in a magnificently complex technological society, and I think you will agree that public education with its singular responsibility for a sound and basic educational foundation for all children faces the most exciting years of its existence, with just enough problems for all.

(FINIS)

Nos. 3 and 4 of a Series

Candidates for the Presidency Answer Questions on—

The Federal Government's Role in Support of Education

By **STUART SYMINGTON**

IN THE MANY hearings on this subject during the past ten years, it has become increasingly clear that there is a need for federal participation in the field of public education. This is not a point of abstract philosophy, but a statement of demonstrable fact. . . .

Now is the time for action. The correlation between education and our national interest is, I believe, a matter beyond dispute. We cannot afford the luxury of waiting for the education problem to solve itself.

If we are realistic, we cannot anticipate the full solution of this problem from state and local sources. There is too much variation in what the states and school districts are able and willing to do.

We cannot become prisoners of obsolete dogma.

We are told that federal aid threatens our long-established tradition of local control over education. This serious charge has been leveled at every proposal for federal aid to education that has been submitted to Congress in recent years.

If, however, we examine our history, we find that this charge is without basis. We have had federal aid to education since before our Constitution was signed and have devised new forms of aid during the course of our national existence. Can anyone really say that these federal activities have led to the demise or diminution of local control?

Since 1950, we have had continuing programs of federal assistance for federally impacted school districts. No one familiar with the operation of these programs contends that either P. L. 815 or P. L. 874 has led to "federal control." On the contrary, these programs have bolstered local control by allowing the school districts to conduct their business on a much sounder financial basis.

Sound proposals for aiding in school construction and teachers' salaries will likewise have a beneficial effect. By aiding the local authorities in meeting their responsibilities, the federal government, far from "controlling," will actually be strengthening these community agencies.

The loss of local control—should this occurrence ever happen—will come not from measures like the Murray-Metcalf Bill, but rather from the inability of the local districts to perform their necessary functions in a manner that can build public confidence.

We are not searching for panaceas. Enactment of a particular measure will not automatically do away with all the problems in our system for public education. But legislation providing federal assistance for school buildings and teachers' salaries, coupled with a continued and vigorous activity on the part of state and local authorities will be a long stride in the right direction.

This problem has been with us now for several years. Hearings have been held that fill thousands of pages with testimony. The matter has been debated on the floor of Congress on several occasions. The facts are in and the issue has been fairly drawn.

Let us no longer delay the enactment of legislation for an adequate national education assistance program.

EDITOR'S NOTE—*The above is excerpted from a statement made by Senator Symington before the Senate Committee on Labor and Public Welfare. It is his response to an invitation sent on PDK Board authority to all major avowed candidates for the presidency.*

By **JOHN F. KENNEDY**

NO PROBLEM has grown to greater proportions in the past several years than that of our educational system. And no problem touches all of our lives more directly. Our competition with the Soviets depends in part on the science training in our high schools. Our stature abroad—the legend of the "Ugly American"—is affected by how many language teachers are available in the lower grades. The wisdom of our legislators—holding in their hands the power of war or peace, of death and taxes—is dependent upon the wisdom and the education of Americans in every remote corner and village of the nation.

American education today is in a crisis—and the sorry prospects are that, without prompt Congressional action, that crisis will only grow worse. . . .

"There is a time," James Truslow Adams once wrote, "for quantity and there is a time for quality." But American education today is desperately in need of both. Our schools and our colleges at every level need a quantity of teachers, a quantity of buildings, and a quantity of money. And they need better quality teachers and better quality curricula—which also require money.

But despite all our luxuries, all our prosperity, all our gadgets and conveniences and progress, we are devoting less than one out of every thirty dollars to our educational system. State and local government, without adequate tax sources, with growing debts in other fields, cannot—despite marvelous efforts in recent years—keep up with these fast-rising construction demands. *And the federal government has failed to do its share. . . .*

"I have consistently supported the principle of federal assistance to education, and co-sponsored the amendment to the Murray bill which provided federal funds for school construction and teachers' salaries. This legislation should have the highest priority."

So said Senator Kennedy in reply to a request for answers to key questions concerning his stand on federal support for education. The accompanying article is taken from a speech he delivered recently on the same subject.

Senator Kennedy has also made clear his attitude toward the use of public money for parochial schools. He has said flatly that the payment of federal funds to sectarian schools is unconstitutional and has voted against a Senate amendment to a school-aid bill, introduced in February, which would have used public money to build nonprofit private schools, including parochial schools.

We need programs of student aid, loans, fellowships, and scholarships—and not limited only to the fields of science and defense. We must start building now the classrooms and dormitories our colleges already need—building programs which the President halted by virtue of his two Housing Bill vetoes. We need research grants for teachers and others outside the health and science fields. We need to find ways of meeting our colleges' growing shortage of available capital.

The issue is not one of federal control of education. No one is in favor of that. Traditionally local jurisdiction and academic freedom must be scrupulously maintained. The unnecessary, ineffective, and discriminatory loyalty oath added to last year's Defense Education Act was a grave mistake—and I can assure you that efforts are being made again to remove this handicap from the act.

But the issue is not national control—it is national survival. The Chairman of the Soviet Academy of Science has promised "great efforts . . . to beat the United States on all scientific fronts." Premier Bulganin told the Community Party Congress that the more than 2,000 skilled technicians they have sent to nineteen underdeveloped countries are the real "gold reserve" of Russia. The Soviets have spent at least two and one-half times as much of their national income on education—and within a few years, it is estimated, they will have three times as many scientists and engineers.

But it is not merely a matter of competing with the Russians. Civilization, according to the old saying, "is a race between education and catastrophe." Today, it is up to our government—but basically up to you, the voters—to determine the winner of that race.

EDUCATION AS A TOOL OF POWER

An Analysis of the Schools of Red China Today

By DEL WEBER

THE end of civil war in China in 1949 was followed by a series of changes designed to reform the educational program of that country. Immediately subsequent to the establishment of the new regime, the Communists called conferences for the discussion of the new adjustments to be made in the schools at various levels. That the Communists considered education as a major tool in their policy of reconverting a backward society into a world power can be seen from the immediate attention given to the educational system.

Prime emphasis in the reform of the old system was given to replacing Kuomintang-sponsored courses with courses in Marxist ideology. All courses were to be based on Communist theory and teaching, and separate courses in dialectical materialism and "New Democracy" were required of all students in higher education.

While the old schools were undergoing revolutionary changes in curriculum, methodology, and spirit, new schools such as the peoples' universities, short-course schools, spare-time schools, and winter schools were established. Designed to meet the exigencies of the times, these schools catered almost exclusively to revolutionaries and peasants. The rationale behind their establishment can be seen historically in the rise to power of the Communist Party in China. China, predominantly an agrarian society and practically devoid of industry, had never had a numerically strong middle class. It provided, therefore, an atypical pattern for a Communist revolution. Thus it was that Mao Tse Tung in his struggle to ascendancy had relied heavily on the peasant class. Moreover, Mao realized that before China could move into the period of communism, it would have to move through a transitional period called the "New Democracy," in which the middle class would ally itself with the peasants. During this period every effort was to be expended in strengthening, through education and other means, the ideological stability of the peasants. Prior to 1949 the Chinese educational system had not catered to this element of the population, and facilities for the type of educational program from which they could profit were non-existent. Realizing the necessity of an educated peasantry, the new government devoted its main educational efforts to this group. Interestingly enough, although the Chinese Communists now claim to have moved into the full period of communism, it is still to this group that the bulk of the educational effort is directed.

What in effect has happened in the last decade in China is that, through reform and revolution, the Chinese Communist government has succeeded in changing and reorienting the structure, organization, and philosophy of the educational program. Although the educational system is still in a constant state of flux, nevertheless the following major characteristics and trends seem to emerge as the dominant educational pattern of China.

Education must be led by the Communist Party. One of the first things any person studying this system is bound to notice is the complete control exerted by the Communist Party from kindergarten through the universities. The Ministry of Education containing the departments of higher education, secondary education, primary education, social education, and supervision was established in October, 1949. It is under the Government Administrative Council and is directed by the Committee on Cultural and Educational Affairs.[1] Its main responsibilities are to issue directives with respect to the administration and organization of schools, curricula, textbooks, and methodology, and exercise general supervision over primary, secondary, and adult education.[2] In all the prov-

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[1] R. F. Simpson, "The Development of Education on Mainland China," *Phi Delta Kappan*, December, 1957, p. 86.
[2] United Nations Educational, Scientific and Cultural Organization, *World Survey of Education*, Vol. II, Zurich, Switzerland, p. 253.

inces and municipalities there are educational bureaus and educational and cultural offices in the special districts and counties. These bureaus and offices are under the leadership of peoples' committees at their corresponding levels, as well as under the educational administrative bodies at higher levels.[3]

How the Party Exerts Control

The Communist Party exerts its control in various ways through the Ministry of Education. First of all, the ministry counsels with educational authorities and educators through centrally organized conferences. These conferences may deal with education in general or with some specific problem. These conferences usually result in a directive which is implemented by the various authorities throughout the school system. Secondly, over 90 per cent of the schools are state controlled and receive most of their money from the central government through the Ministry of Education.[4] While small fees for primary students and secondary students are still charged, this in no way covers the total cost of operation, which must be subsidized by the state.[5] With control of the purse strings, the Communist Party has a convenient lever by which to assure "efficient" operation.

A third method of control is through party organizations within the school system itself. One of the urgent tasks set down by the Communists after they took over was the training of "cadres" —people who had been revolutionaries or had been active in party work to go into the schools and industries of China to serve as the backbone of the new society.[6] These people then become instrumental in setting up party organizations within the schools. The constitution of the Chinese Communist Party specifies the role of the party in the schools. Chapter 6 provides: " . . . in a . . . school in which there are more than three party members, a Party branch is to be established. . . . "

Article 50 provides: " . . . in a . . . school of more than 100 persons, a general Party branch is to be established. . . . "

Article 51 provides: "In a school in which there are more than 500 Party members . . . a school Party committee may be elected. . . . "[7]

This means, then, that schools have actually been turned into basic organizations of the Chinese Communist Party. The party organizations among the schools control not only their members but the overall activity of the school as well. Perhaps the best known of all these organizations is the New Democratic Youth League, instituted by the Communists in 1949. This league is essentially the same thing as the Communist Party, the only difference being in the age group served. This group, along with the Pioneers (the party organization for the primary school) is undoubtedly the basic means by which the Communists control schools in China. The primary task of the NDYL is to "help the Party to educate the younger generation with Communism."[8]

Lastly, the government exerts considerable control through a system of unified enrollments, unified assignments, and exams. In 1953 the Ministry of Education set up a National Enrollment Committee for Institutes of Higher Education. This committee, made up of various educators, party members, and heads of government departments, is charged with enrolling students at the various institutions in accordance with "state construction needs, the subjective conditions of higher education institutes, and the possible source of new students."[9] What this means in practice is that the student is selected on the basis of various qualifications set down by the government and that he is directed into the line of study where the government feels he will be most useful. Moreover, once a student completes his course of study he has very little opportunity to choose a line of work on the basis of his own wishes and desires. The basic policy as set down by the Ministry of Education in 1951 is to make centralized distribution of graduates to key points where they are most needed by the government.[10] Although students may list preferences as to work and location, government needs come first. There are many indications from the literature surveyed that students have objected to this control over their careers.

The Trend Toward Decentralization

Since mid-1958 there has been a trend toward decentralization of control by the Ministry of Education. Various provinces, municipalities, and autonomous regions have been entrusted with the administration of all primary schools, middle schools, and most of the institutions of higher education and secondary vocational schools. The administration of many of the secondary vocational schools and schools for technical workers which are still under the jurisdiction of the different ministries of the Central Government is being given over to the factories, mines, farms, and other enterprises to which they are attached.[11]

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[3] *Ibid.*
[4] Simpson, *op. cit.*, p. 86.
[5] *Ibid.*, p. 87.
[6] Liu Chih, *op. cit.*, p. 194.
[7] Chao Chung, and Yang I-fan, *Students in Mainland China.* Hong Kong: The Union Research Institute, 1956, p. 35.

In July and August, 1958, 55 to 74 per cent of the higher educational institutions, secondary technical schools, and schools for training skilled workers were transferred to local authorities under this plan.[12] Of the 227 "regular" universities, 187 are to be turned over to local administration.[13] Moreover, the system of unified enrollments under the central government has been delegated to local authorities.[14]

What is the reason for this apparent about-face in Communist tactics in regard to control of education? Some writers have interpreted the move as a signal for relaxation of party control over the school system. But such is not the case, as is soon apparent from reading the Chinese Communist news releases. The reason for the move is political: "to strengthen further the leadership of the Party over higher education, secondary vocational education, and schools for technical workers. It is a new combination of centralized leadership with decentralized management."[15] It gives more direct control to local party leaders while at the same time allowing them to manifest local "activism" and greater flexibility in adapting colleges to regional and local demands without having to refer to Peking every time. In actuality, then, the control has not been lessened. The central authority still takes care "of the training of teachers, the drafting of teaching plans, the compilation of teaching material and the guiding of research in teaching methods. . . . "[16] "All institutions," whether under the "direct leadership of the . . . Central Government or under local administration, must centrally abide by the need of the course of socialist construction."[17] In short, the Communist Party, whether at the local or central level, still permeates and controls the entire educational system of China.

Education must serve political ends. Basic theory was set forth by Lu-Ting Yi, head of the Agitation and Propaganda Department of the Central Communist Party, as follows:

> We believe that pedagogy is a branch of social science. All the social sciences must follow politics, and education is no exception. What people require education for is to wage the class struggle and the struggle for production. We believe there are only two kinds of knowledge in the world. One kind is the knowledge of the class struggle . . . and philosophy is the summing up and generalization of the two kinds of knowledge. The importance of philosophy consists in this, that dialectical materialism provides men with a correct method of thinking. . . . Errors always emanate from two sources—one being class origin and the other the method of thinking. To avoid making great errors or to commit few errors, people must study politics. . . . [18]

This is a succinct statement of the directing principle of educational work in Mainland China. Education in political ideology is thus a major part of school work in Mainland China. In all the schools the students must cultivate the collectivist viewpoint, the dialectical materialistic viewpoint, and the viewpoint of the working class. The aim of this political education is "to train workers with Socialist consciousness and culture, . . . a man of all-around development."[19] This "man of all-around development" should not be confused with what is thought of in the free world as the "well-rounded person." The Communists do not have in mind a man with a broad general and liberal education. Rather, he is the person who has been thoroughly indoctrinated with Communist ideology and who is a willing and obedient servant of the state. To this end, besides being given separate courses in Marxism-Leninism, *all* subjects must be taught from a new point of view. As Chen says,

> History, including Chinese history, must be rewritten to fit into the Communist scheme; it must tell of a primitive Communism giving place to the slave-system, succeeded in turn by feudalism and capitalism, and followed by the proletarian revolution ushering in Communism and the classless society of the Golden Age. Events in the past must be re-interpreted in accordance with this scheme; rebellions must be seen as peoples' revolutions, rebel leaders as heroes of the People, kings and conquerors as warlords and oppressors, law and policemen as devices of the rich for the securing of their property. Literature and art which in the past have been made to pander the tastes of the leisured must be used to reflect the sufferings and struggles of the People.[20]

How is this political education carried on? The teachers, of course, are considered the major factor in this education. To this end they are organized, especially in the institutes of higher learning, into groups for systematic study of political theories. These groups meet in study groups as much as twice a week for the consideration of such basic works as *On Practice* and *On Con-*

[8] *Survey of the Chinese Mainland Press*, Vol. 1022. Peking, April 5, 1955, p. 4.
[9] *Survey of the Chinese Mainland Press*, Vol. 607. New China News Agency, July 10, 1953, p. 8.
[10] *Survey of the Chinese Mainland Press*, Vol. 392. New China News Agency, August 12, 1952, pp. 9, 10.
[11] *Survey of the Chinese Mainland Press*, Vol. 1883. Peking, October 28, 1958, p. 16.
[12] *Survey of the Chinese Mainland Press*, Vol. 1841. New China News Agency, Peking, August 27, 1958, p. 13.
[13] *Ibid.*, p. 12.
[14] *Survey of the Chinese Mainland Press*, Vol. 1810. Peking, July 14, 1958, p. 26.
[15] *Survey of the Chinese Mainland Press*, Vol. 1841, *op. cit.*, p. 14.
[16] *Ibid.*, p. 13.
[17] *Ibid.*, p. 12.
[18] "Education Must Be Combined with Productive Labor," *Current Background*, Vol. 516, September 2, 1958, p. 3.
[19] *Survey of the Chinese Mainland Press*, Vol. 1883, *op. cit.*, p. 15.
[20] Theodore H. Chen, "Education in Communist China," *The World Today*, VIII, June, 1952, p. 261.

tradiction.[21] During these sessions many of the teachers criticize their mistakes of neglecting political education.

Political Education in Small Groups

The main vehicle for the assimilation of this political education by the students is the small group. These groups consist of ten to twelve students. In these groups "self criticism" is encouraged. This provides a way for the regime both to keep itself informed about the inner thoughts of others and as a further means of maintaining its control. Each group has a leader who is either a Communist party member or a member of the NDYL. This "small group life" extends out of the classroom and even into the dormitory and recreational life of the students.[22]

The study of current events is a regular part of the curriculum. This probably could more accurately be termed a "study of policy on current affairs," for the student is taught to expound and parrot whatever the authorities feel is the "general line." The Peking government considers the learning of this subject important because it wants to prevent students from departing from a "realistic political life"—in other words, it wants them to "concern themselves with politics." This is brought out quite well in the July, 1955, issue of *People's Education:*

> Education in the policies relating to current affairs is a very important part of education in political ideology. When it is neglected, education in political ideology will become feeble and weak; and our agitation to establish a socialist political direction will be like a tinkling brass. In this case, educational work will depart from realism and school work from real class struggle. Then great dangers will be encountered.[23]

As a result, students are kept aware of the general line followed at any particular time by the government. This over the past few years has included study about the Three Anti- and Five Anti-Movements, the Resist Aggression Movement in Korea, and others. However, two main propaganda themes are constantly woven into the discussion: (1) The world is divided into two groups, war-mongering nations led by the United States and peace-loving nations led by the Soviet; and (2) There will be no peace for China until Formosa is liberated.[24]

It is interesting to note that the Communists evidently have not been without their problems in this phase of their educational program. Some students were found to be "lacking a clear-cut class standpoint, . . . a clear view of democracy and freedom," and some were unable to "ideologically distinguish the enemy" from the Communists.[25] Students' thoughts were being corrupted due to "the weakness of ideological education on the part of the schools, . . . and due to the influence of the non-proletarian ideologies on the students."[26] Moreover, Mao Tse-Tung, in an address in early 1957, deplored the falling off in ideological and political work among students and intellectuals and the unhealthy tendencies which had appeared recently. He urged teachers to remedy these shortcomings. "Our educational policy," he declared, "must enable everyone who gets an education to develop morally, intellectually, and physically and to become a cultured, socialist-minded worker."[27] As a result, ideological and political education in the school curriculum has been emphasized even more strongly. Evidently, however, problems still remain, for as late as May, 1959, Yang Hsiu-feng, minister of education, urged stepped-up efforts in the study of Marxism-Leninism, current events, and government policies.[28]

Education must be combined with labor. The question of bridging the ancient division between the illiterate, laboring masses of China and the sophisticated, intellectual elite has long been a matter of concern to the Chinese Communist leaders. It is with this in mind that the current regime has, since the end of 1957, instituted the now widespread system of "half work and half study" among students in Mainland China as a means of linking the intellectuals more closely with the workers and peasants and integrating mental with physical labor.

Combining Labor with Education

Although, as pointed out before, China has had polytechnical education since 1952, very little attention was actually given to combining labor with education in a systematic way until late 1957. At that time the Central Committee of the Party stressed this policy.[29] Since then there have been many new developments. Productive labor has been listed as a regular part of the curriculum. In full-time schools primary

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[21] *Survey of the Chinese Mainland Press*, Vol. 880. Peking, Kwang Ming Jih Pao, May 29, 1953, p. 7.
[22] "Chinese Coed in a Communist College," *The Reporter*, XI, August 17, 1954, p. 22.
[23] *People's Education*, July, 1955, cited by Chao Chung and Yang-I-fan, *op. cit.*, p. 67.
[24] Cheng Lim Fei, "I Went to School in Red China," *Reader's Digest*, LXX, April, 1957, p. 72.
[25] *Survey of the Chinese Mainland Press*, Vol. 1475. New China News Agency, February 21, 1957, p. 8.
[26] *Survey of the Chinese Mainland Press*, Vol. 1494. Peking, March 21, 1957, p. 15.
[27] *New York Times*, June 19, 1957, p. 14.
[28] "Some Speeches on Culture, Education and Health Delivered at the First Session of the Second National Peoples' Congress," *Current Background*, Vol. 577, May 14, 1959, p. 13.
[29] *Current Background*, Vol. 516, *op. cit.*, p. 8.

students from the age of nine begin to take part in limited manual work not more than four hours per week; the middle school student labors six hours per week in the junior grades, and eight hours per week in the senior grades; the university and college student works for a total of two to four months per year. In "half-day" schools students study for half a day and work for half a day or study and work on alternate days or weeks.[30] There are three basic ways for students to participate in productive labor:

1. In factories and farms organized by the schools.
2. In rural areas or factories through arrangements made by the school.
3. In definitely prescribed social welfare undertakings.[31]

This productive work is by no means limited only to students or carried on only during the school year. In many cases even the summer vacation is taken up by "participation in physical labor with the peasants and workers."[32] On the other hand some schools dismiss for as long as a year in favor of participation in labor production in rural areas.[33] There is some indication that not all students are happy about this "half-study, half-work program." One student wrote:

> All of us are working day and night smelting iron and steel. . . . We often stop classes for labour. . . . We wash ore or build roads and sometimes we work the whole night without a second to close our eyes. This kind of work is hard. I don't know what will become of me.[34]

In its directive of September, 1958, the Central Committee of the Communist Party Stated:

> The direction henceforth is for the schools to set up factories and farms and for the factories and agricultural cooperatives to establish schools.[35]

By November, 1958, over 150,000 factories and 100,000 farms had been set up by more than 20,000 educational institutions and it was estimated that by the end of 1958 they would have produced 1,580,000 tons of iron and steel, 36,600 machine tools, and 1,930,000 tons of fertilizer.[36]

Another development along this line has been the establishment of hastily formed "red and expert" universities to train large numbers of politically reliable workers and peasant cadres. The intent is to make them more "expert" in their work and "red" in their unquestioning loyalty to the Communist leaders. These schools in many cases have replaced the "regular" universities and now outnumber them 1,065 to 227. In many cases, however, they are undoubtedly existing schools modified and renamed "universities."[37] The schools are actually an extension of the People's Universities referred to earlier: no minimum formal education requirement is required for enrollment, and instruction is at two unrelated levels. The students are taught communism—its genesis, growth and development, and Marxist economics—plus all that is necessary in certain narrow fields of specialization, mostly semi-skilled jobs. Through this training the student becomes a fanatical Communist and an expert mechanic.[38] It is obvious that these schools in many cases are little more than trade schools and are hardly comparable with the schools in the free world so far as academic standards are concerned. However, it must be remembered that the aim of the Communist educational system is not to develop people versed in the humanities with a broad general education, but rather to foster socialist-minded and "cultured" laborers. Communist leaders feel that "work combined with education" can do this best.

Latest Development: Boarding Schools

The latest trend in connection with combining work with education has been the establishment of primary boarding schools where the students work, eat, sleep, and study. The Communists have felt this move to be necessary so the children may "rid themselves at an early stage of their mental development [of] the influences of backward and selfish concepts born with the old family institution." Moreover, "the development of production calls for an increasing number of women to take part in labor."[39] Needless to say, many of the peasants have not been entirely happy with this development.

In addition to the aforementioned reason for great emphasis placed on the "work and study" program, one other should be mentioned. Perhaps it is the most important. In an editorial, *Jen min Jih pao* said in June, 1958:

> We must realize that if our industry is to overtake and surpass Britain in the output of steel and

[30] J. C. Cheng, "Half Work and Half Study in Communist China," *Pacific Affairs*, XXXII, June, 1959, p. 187.
[31] *Survey of the Chinese Mainland Press*, Vol. 577, *op. cit.*, p. 15.
[32] *Survey of the Chinese Mainland Press*, Vol. 1875. New China News Agency, August 5, 1958, p. 19.
[33] *Survey of the Chinese Mainland Press*, Vol. 1847. New China News Agency, September 5, 1958, p. 9.
[34] "Schools and Steel," *Time*, LXXII, December 15, 1958, p. 50.
[35] *Survey of the Chinese Mainland Press*, Vol. 1883, *op. cit.*, p. 14.
[36] *Survey of the Chinese Mainland Press*, Vol. 1892. New China News Agency, November 5, 1958, p. 13.
[37] "Higher Education in Communist China," *The World Today*, XV, January, 1959, p. 38.
[38] S. Chandrasekhar, "Mandarins in Overalls," *The Reporter*, XX, May 28, 1959, p. 24.
[39] "Collective Life for School Children in Communist China," *Current Background*, Vol. 540, December 18, 1958, p. 10.

> other important industrial products within fifteen years or less, and if our agriculture is to outstrip that of the capitalist countries as soon as possible, . . . development of our culture and our education at a tremendous rate is necessary.[40]

CHINA provides an excellent example of the manner in which an educational system may be used to achieve the social and political aims of those in control of a country. Within the framework of a highly centralized and rigidly controlled educational operation, the Chinese Communists have attempted, through great emphasis on political indoctrination, to inculcate Communist aims and ideals. Classical learnings, once the essence of Chinese education, have largely been obliterated and great emphasis has been given to labor as an integral part of the curriculum.

While the "academic" value of such an education may well be questioned, it cannot be denied that China has made great strides in achieving the type of educational organization which the party hierarchy of that country deems necessary.

It will be interesting during the next few years to observe the development of this educational program—to see if it is able to produce the type of person which the Communists desire and to see what further changes are instituted as the need for adjustment arises.

[40] *Jen min Jih pao*, June 17, 1958, cited in "Higher Education in Communist China," *op. cit.*, p. 40.

Reaching and Teaching the Individual

By **WILLARD C. OLSON**

MODERN research has provided us with careful records of how children grow. This evidence contends with traditional ideas concerning the role of schools and the methods of education. To take growth in reading as an example, the more you teach and the longer children attend school the more they differ. Although seven-year-olds differ only a few years in their ability to read, these same children will test all the way from eight to eighteen by the time they are twelve. Popular opinion to the contrary, these differences are not "curable" in the ordinary sense of the word. They are almost as stubborn to planned change as is height and weight.

"Letters-to-the-editor" solutions, such as increased time and emphasis, particular methods, upholding of standards, and use of competitive marks, have all been tried and found to be inconsequential as means of producing growth. Various plans for grouping pupils have similarly been examined and found to be without special potency for making differences in the area of common learnings, such as reading and arithmetic. Thus, grouping by height or no groupings at all in the junior high school competes with ability grouping in terms of educational outcomes. Presence and absence of opportunity for learning make a difference. Inconsistent differences of a few months are found for special plans, while the differences between children have a magnitude in the vicinity of 100 months.

As the body of fact on individual differences grows, there has been a change in practice, from denial of the existence of such differences, to toleration of them as a nuisance that must be lived with, to active cultivation of them as a precious asset with the goal of growth for all.

Achievement in school is an end product of maturation and experience (as is true for all growth). If experience is not provided (as in underdeveloped countries without schools), growth fails and illiteracy is the consequence. A good school environment for growth provides diversity of opportunity in the difficulty of materials and in the areas of experience provided. The environment should have a diversity that matches the diversity of the human beings in it. This is the basis of the comprehensive high school idea and for the abolition of "a grade is a grade is a grade" concepts in elementary education.

Fortunately, the wisdom that children show in their "seeking" behavior and response to experience gives the teacher important clues for instruction. The class as a group can give much support to the attainment of desirable goals. The contemporary emphasis on meaning as opposed to memorization re-inforces learning, sustains motivation, and keeps children in school longer, so that they have more of that precious commodity —time to grow.

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ELEMENTARY EDUCATION—
Five Straws in the Wind

By **J. D. McAULAY**

IT is said that the decade of the Sixties will bring man more social and scientific change than he experienced during the past hundred years, and that the acceleration of change will be the most dynamic in history.

One would suppose that the elementary school —in goals, organization, curriculum, and methodology—will be affected by this speed of change; that it will be an institution fermenting, revolving, and experimenting, even as the secondary school has been in recent years. And if one looks closely, he can detect at least five straws in the rather shifting winds of the Sixties. They are not tinder for a revolution, but they are definitely there.

The first straw is labeled science. Very possibly, science will become the core of the elementary school curriculum, at least after the primary grades, just as social studies have been for the past two or three decades. A recent survey of the new curricula in twenty-nine representative school districts, selected at random from California to Maryland, indicate almost twice as much content devoted to science as to the social studies. Seventeen of the curricula suggested techniques and methods of correlating science with language arts, social studies, and art.

In the Thirties and Forties American society itself was vitally concerned with the study of social conditions. This concern was reflected in the curriculum of the elementary school. Today, society's interest is in rockets to the moon, space platforms, and atomic energy. The curriculum of the elementary school reflects this change in interest. Unfortunately, those twenty-nine curricula mentioned above emphasize content in the sciences, more information on magnetism, on electricity, on the adaptation of living things to the environment. They *should* emphasize understanding and use of the scientific method, scientific experimentation, and investigation.

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The second seeming trend in the elementary school is the downward pressure through the grades of content material. A recent survey of seventeen kindergarten classrooms scattered throughout an eastern state indicates that thirteen are using basic primers and eleven are teaching separations and combinations up to five. Such kindergartens are becoming more like the traditional first grade than a preparation for the first grade. The chief function of the kindergarten as a socializing experience seems to be disappearing, perhaps to be adopted by the nursery school.

The arithmetic syllabus for the fourth grade of Delmarva, Pa., was revised during the winter of 1959-60. Some of the basic changes in the syllabus reveal this downward pressure of content:

1960, 4th Grade Syllabus

1. Read and write numbers to 1,000,000.
2. Read and write U. S. money to any reasonable amount.
3. Read and write Roman Numbers to L.
4. Addition and subtraction of integers to four and five place numbers.
5. Multiply by three-digit multipliers.
6. Do long division using two- and three-place divisors.

1959, 4th Grade Syllabus

1. Read and write numbers to 10,000.
2. Read and write U. S. money to small amounts.
3. Read and write Roman Numbers to XXX.
4. Addition and subtraction of integers to three place numbers.
5. Multiply by one-digit multiplier.
6. Do long division using single-place divisors.

Today's children are better acquainted with the world about them than were the children of a decade ago. Television and radio, travel and urbanization have widened and increased the child's vision and understanding. Too often the child, because of this widened and enriched experience, has matured too quickly, perhaps. But the opportunity to learn and develop outside the classroom situation is much greater than a decade ago. Thus the child may be capable of absorbing a deeper curriculum, although not necessarily a broader one.

The curriculum of the elementary school needs more weeding and reorganization than it needs stuffing and enlargement. It contains much dead content relatively useless in an age of automation and space travel. In too many elementary schools, hours are spent on repetitive penmanship; countless social studies periods romanticize pioneers, Indians, and community workers; stereotyped reading material consumes entire mornings. Rather than press more content into the curriculum, it would be best to revise what is already there.

The third straw in the wind has to do with homogeneous grouping, mainly by mental age. Seven junior high schools on the eastern seaboard, each with an enrollment of over a thousand students, report that beginning in September, 1960, homogeneous grouping will be initiated on the basis of I.Q. scores. The fever has spread into the elementary school, even to the first grade.

More Than Half Grouping by Ability

One hundred thirty elementary schools distributed through five contiguous states were surveyed to determine the prevalent practice in homogeneous grouping. Seventy of these elementary schools reported some ability grouping. Thirty-six schools organized the fifth and sixth grades by ability: the child with the higher I.Q. under one teacher, the child with a lower I.Q. under another. Twelve schools used a similar classroom organization in grades three to six. One school actually separated its first grade children into classrooms on the basis of I.Q. scores. Fifteen schools indicated that homogeneous grouping was used only in the sixth grade. One of these schools explained that a sixth grade would contain all those children with an I.Q. of 120 to 129. Seven elementary schools reported that children were grouped into classrooms based on interest and/or need. One school indicated that sixth grade children primarily interested in science are separated into one classroom, while children interested in art go into another and those interested in music enter a third classroom. One school reported its children separated into classrooms on the basis of reading need. One school separates "the itinerant children from those whose families are well established in the community."

Little serious research has been completed on homogeneous versus heterogeneous grouping since the Thirties, and the evidence from that decade indicates that heterogeneous grouping resulted in higher academic standards and fuller social growth. Further research on homogeneous grouping should be validated before administrators push the popular emphasis on the education of the gifted, which in too many cases degenerates into ability grouping based solely on academic criteria.

Parallel to homogeneous grouping is a seeming trend towards further departmentalization in the elementary school; at least there is increased interest in using more specialized personnel in special fields. For example, forty-three elementary schools in California reported the addition of science teachers for the fourth, fifth, and sixth grades. Specialists in this content area move through the intermediate grades during the school day. Other elementary schools of the same state report the addition of reading, art, music, and physical education instructors and/or specialists in the teaching of spelling and penmanship.

Behind this trend is the growing influence of specialization in the preparation of elementary teachers. A comparison of forty-five 1956-60 catalogues of teacher-preparatory institutions with catalogues for the preceding year indicates an average increase of twelve hours in a liberal arts major for the under-graduate degree in elementary education. Eleven of the recent catalogues urge students in elementary education to "specialize" in the social or physical sciences or in one of the creative arts on the undergraduate degree level. Three catalogues urged young teachers in preparation for the elementary school to secure a solid basis in one area of the liberal arts so that on the master's degree level they would be acceptable for graduate work in one of the "honored disciplines."

This trend seems to be based on the assumption that content specialization is the core of the elementary school curriculum. Seemingly forgotten is that goal which would give the child a method and means of solving problems.

The Trend to 'Bigness'

Another trend in the elementary school is towards "bigness." School districts are, through consolidation, growing larger. More and more children are carried by bus to schools farther and farther removed from the immediate home community. Seven school districts in one Midwestern state, each enrolling over 5,000 children in the elementary schools, transport first and second graders to certain designated schools only, third and fourth grades to a second group of schools, and fifth and sixth graders to other particular schools within the district. Reports one of the superintendents: "With increasing centralization this would seem to be the more efficient method of administration." The elementary school itself, during the academic year 1957-58, increased in size by three and a half classrooms. Also, in many

new suburban areas, schools contain a population of only one socio-economic class. Thus to bigness is added social isolation.

Research needs to be conducted on the emotional and social effects of transporting youngsters many miles to and from school. Can the larger, more specialized elementary school foster social cohesiveness, institutional unity, and environmental creativity?

Perhaps the five straws in the wind indicated here are genuine trends, forced upon the elementary school by the very nature of social change. Before hieing off in pursuit of them, however, let us be sure they are in harmony with the best research available to us. Let us push new research as rapidly as possible. Let us be sure we are not retreating to outmoded ideas of the Twenties and Thirties. And let us continue to evaluate new ideas in the light of theory, for good theory will always precede best practice.

Personality Factors in Driver Education

Poor research and worse reporting produce strange generalizations. The facts about driver education aren't all in, of course, but some interesting studies are under way. Here is a summary of a sophisticated one.

By **JOHN J. CONGER**

SOME press reports of a paper[1] presented by Dr. Robert V. Rainey, Charles R. Walsmith, and myself at a recent meeting of the Highway Research Board of the National Academy of Sciences have erroneously stated that we found driver education programs to be of no value in reducing accidents. I am grateful for the opportunity presented by the KAPPAN editor to correct this impression, and to summarize briefly what we actually did and what we found after intensive study.

In recent years, driver training programs in the United States have mushroomed, particularly within school systems, but also in the armed services, in industry, and among the public generally. In large measure, the justification for this expansion has been the lower violation and accident rates often found among graduates of driver education programs.[2,3] These statistics have been widely interpreted as demonstrating that driver education "works," that it does, in fact, produce safer drivers. It was our opinion that while this might well be true, it is not necessarily the only conclusion that can be drawn from the available data. Is it not equally possible, for example, that students who elect driver education may differ in important personal characteristics from those who do not elect such training and, if so, that these differences *may* be a contributing if not the primary factor associated with subsequent differences in accident and violation records? In other words, is it not possible that one characteristic of the kind of person who is likely to become a safe driver is that he will be more likely than his peers to elect driver training?

It was our belief that such a possibility at least deserved serious investigation. For this reason we conducted a study designed to investigate the question, "Are students who elect to take driver education significantly different in important personal characteristics from students who do not elect to take such training?"

With the cooperation of local high schools, a driver education group was selected consisting of fifty-two male students who had elected and taken formal driver education in the period 1957 to 1959. They were compared on a variety of personality measures with a control group of 104 male students who had not elected and consequently not taken driver education. The two groups were matched for such possibly relevant factors as socio-economic status, school background, opportunity for driver education, and access to cars.

The driver education and non-driver education groups were found to differ significantly ($p < .05$) on eight of a total of twenty-six personality measures. In general, as compared with their non-driver education peers, driver education subjects appeared to be somewhat more introspective, more sensitive, and more aesthetic in their interests, and to feel somewhat more inadequate and concerned with their

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[1] To be published soon in *Highway Research Board Bulletin* under the title, "Personality Characteristics as a Selective Factor in Driver Education."

[2] "A Critical Analysis of Driver Education Research," *Road Abstracts*, National Education Association, Vol. 24, No. 10 (1957).

[3] *Results of Driver Education Programs.* Washington, D. C.: American Automobile Association, 1955.

physical and mental health. In contrast, non-driver education subjects tended to be more active generally, more ascendent and interested in leadership, and more oriented toward gregarious, outgoing, masculine social interests. Furthermore, despite differences in the socio-economic and cultural areas served by the various schools involved in this study, the above picture emerges consistently, and does not change significantly from school to school. However, it should be emphasized that while the personality differences reported above are clear-cut, in neither group were the particular traits which characterized it present in extreme form.

Contributing or Primary Factor?

While it is possible that on cross-validation one or more of the discriminating personality measures may prove insignificant, nevertheless, in view of the proportion of significant to insignificant differences, the consistency of the picture they paint, and the levels of confidence of the significant differences obtained, it appears extremely unlikely that the overall picture would change radically on cross-validation with additional samples from this general population. Thus it would appear that initial personality differences between students electing and taking driver education training, on the one hand, and those not taking it, on the other, may be a contributing—in fact, could conceivably be a primary—factor in accounting for obtained differences in accident and violation rates between students electing driver education and those not electing it.

Further investigation of this possibility will be undertaken in future research. The accident and violation rates over a three-year period of students electing and taking driver education training will be compared with those of students electing but not taking driver education, and those of students not electing and not taking driver education. If it should be true that personality differences between driver education and non-driver education groups, such as those found in the present study, constitute a primary reason for the safer records generally reported for students having had driver education, then it might be anticipated that the safety records of students *electing* but *unable* to take driver education training will prove more similar to those of students *electing* and *taking* driver education training than they will to those of students *not electing* and *not taking* driver education.

Of course, it may prove, as a number of driver training experts believe, that both "selective bias" in the formation of driver and non-driver education groups *and* the effects of driver training itself may contribute jointly to the apparently safer driving records of driver education groups. At any rate, it would appear that we cannot safely ignore the possibility that factors other than driver training itself may be contributing significantly to reported differences in accident and violation rates between driver education and non-driver education groups.

Unflattering Image of Administrators

► "What has happened to make it possible for so many to assume with so much heat and righteous indignation—and with so little opposition—that administration has lost sight of its basic purpose and is engaged primarily in interfering with, and retarding, the efforts of teaching?"

This question was asked by New York State Commissioner of Education James E. Allen at the recent annual conference on Educational Finance and School Business Administration, New York University. His title: "Administration—Sinner or Scapegoat?"

Although Allen didn't entirely exonerate administration, he mentioned certain extenuating circumstances, as follows:

- Rapid growth—preoccupation with material needs, shortage of personnel.
- Underemphasis on the educational as opposed to the technical-managerial aspects of the superintendency.
- Breakdown of communication.
- Overselling educational accomplishments.

Among his prescriptions for improving the poor image of administration which seems to exist was this one: Every effort must be made to reduce to a minimum the necessities of administrative detail and practice which interfere with and reduce the effectiveness not only of the teacher but also of the administrator. Allen warned that one of the most common criticisms is that "our schools have grown top-heavy with personnel in the so-called administration or quasi-administration categories. Far from being a help to the overburdened classroom teacher, the large majority of principals, guidance officers, supervisors, etc., seem to delight in adding niggling duties and mountains of paper work to eat at the time and temper . . . of the classroom teacher."

Take It by Correspondence

► Thousands of college courses offered through correspondence by the nation's fully accredited institutions of higher education are listed in a newly-revised booklet, "Guide to Correspondence Study in Colleges and Universities." Course offerings described range from engineering to Arabic, from forestry to fine arts, and from psychology to physics. The 35-page pamphlet may be obtained from the National University Extension Association's Correspondence Study Division, Building TSMc, Room 112, University of Minnesota, Minneapolis. Price, 25¢.

1923 Skidoo

► An Idaho woman teacher's contract in 1923 included the following restrictions:

1. Do not loiter in ice cream parlors.
2. Do not keep company with men.
3. Do not leave town without permission.
4. Do not dye hair or use face powder, mascara, or lipstick.
5. Wear at least two petticoats.

The Future of American Education

Another critic pays his respects to Myron Lieberman for an astute diagnosis of the ills of American education but suggests that *The Future of Public Education* contains both logical and strategical errors.

By **HENRY J. PERKINSON**

THE Future of Public Education[1] presents one of the most penetrating analyses of the American educational system that has yet been given in the twentieth century. Myron Lieberman's diagnosis and recommended treatment of the ills that beset American education have aroused, and will continue to arouse, provocative criticisms from all quarters. As is well known by now, his chief concern is with the institutional aspects of educational reform, or as he prefers to call it, the power structure in education.

> 1. Public education in the United States is much less effective than the American people, especially the teaching profession, assume it to be. More important, it is much less effective than it can and ought to be.
> 2. The most important causes of the ineffectiveness of public education are rooted in its anachronistic and dysfunctional power structure.[2]

These two paragraphs, part of what Lieberman calls the "bare bones" of his position, constitute his diagnosis of the educational problem. I agree with his diagnosis and in addition agree, with some qualifications, with his recommended cure, which he outlines as follows:

> 3. Because most current controversy is concerned with the rightness or wrongness of certain educational policies and not with the power structure within which these policies are made, it is largely irrelevant to the basic problems of education.
> 4. The basic educational reforms needed in the United States will have to be initiated and carried out by the teachers themselves. It follows from this that the study of teachers' organizations—their programs, leadership, political sophistication, strategy, and tactics—must be accorded high priority by those who wish to bring about fundamental improvements.
> 5. Appeals to "the public" to solve the problems of education are usually well intentioned, but under present circumstances they ordinarily result in more harm than good to the cause of public education. They will continue to have this effect until the futility of appealing to a diffuse public becomes manifest to educational leadership and until there is established a sensible delineation of the role of the public in the educational enterprise.[3]

BECAUSE I am fundamentally in argeement with Lieberman's diagnosis of the cause of the ineffectiveness of education, and in agreement as to the kind of changes necessary to bring about a cure, I should like to speak out against what I consider an error on his part—an error that unnecessarily weakens his position, an error that has caused much of the antagonism that this book has aroused. Lieberman has, I believe, made a wrong analysis of the logic of the problem of institutional change, a wrong analysis that is at the same time a strategical error. This wrong analysis leads him to abandon his valuable insight that the solution to educational problems lies in an institutional approach to these problems.

Lieberman's error is simply the "mold" into which he has cast his argument for reform—his rationale for the necessary institutional changes to be made in education. This "mold" is a traditional one in political philosophy. It consists in viewing the problem of government as fundamentally a problem of sovereignty, i.e., to regard the fundamental question to be: "Who should rule?"

Some of Mr. Lieberman's critics have interpreted his book as being primarily concerned with the question: "Who should control education?"

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[1] Myron Lieberman, *The Future of Public Education*. Chicago: The University of Chicago Press, 1960. (Reviewed by Paul Woodring in the December, 1959, PHI DELTA KAPPAN.)
[2] *Ibid.*, p. 5.
[3] *Ibid.*

It must be added that Lieberman himself does seem to regard this as indeed the fundamental question. I would submit that sovereignty is *not* the fundamental problem in any analysis of necessary institutional change; further, I would maintain that Lieberman's diagnosis (with which, as I have said, I agree), need not have been cast into such an unsatisfactory mold.

The Wrong Kind of Question?

"Who should control education?" is just the wrong kind of question to be raised about American education. Any sincere answer to this question demands justification, and any justification will necessarily be some theory of sovereignty. Karl Popper has shown that all theories of sovereignty are paradoxical.

> For instance we may have selected "the wisest" or "the best" as a ruler. But "the wisest" in his wisdom may find that not he but "the best" should rule, and "the best" in his goodness may perhaps decide that "the majority" should rule.[4]

Lieberman's theory of sovereignty is that teachers, because they are professionals, should control education; in other words, educators should control education because this is their right as professionals. But it might be (and in fact is) the considered expert opinion of many professional educators that the *public* should control education. Consequently, it seems unwise to base demands for necessary changes in education on the grounds of a self-contradictory theory of sovereignty. It is for this reason that I say that Lieberman has made a wrong analysis of the logic of the problem of institutional change.

One who agreed with Lieberman might, of course, reply to my objection by saying that any educator who holds that the control of education should be in the hands of the public is just not "professional." But anyone making this reply must recognize that he is limiting the term "professional" to only those educators who are determined that they shall control education. Such a definition of the term "professional" seems to me to be unnecessarily limited, as well as implying that it is not the expertise of the educators that will ultimately determine their right to control education, but rather their strength or power.

My second reason for saying that "Who should control education?" is the wrong kind of question is that such a question raises an issue which most Americans regard as a threat to democracy. The very raising of this question is, in the minds of many Americans, tantamount to questioning the right of the public to control public education. Lieberman, of course, does do just that. But even if public control of education is an historical accident that has no basis other than a rather vague tradition, to indicate that the fundamental question to be faced is the question of control, is, I submit, a strategical error. It is a strategical error because it needlessly arouses opposition to necessary institutional changes.

I realize that by claiming that Lieberman has made a strategical error, I am opening myself to the criticism of hypocrisy. My reply to such an accusation would be that I do not think that the question of who should control education is at all the fundamental question; in fact, I think the question is irrelevant, because, as pointed out above, any answer to it will be paradoxical. The fundamental question is not "Who should control education?" The fundamental question is: "How can we prevent the adoption of policies that render education ineffective, and at the same time prevent tyrannical or totalitarian control, no matter who controls education?"

I agree with Lieberman's claim that under our present system of education "local control results in the same kind of intellectual protectionism that characterizes schools in totalitarian countries."[5] Consequently, in seeking to answer what I have stated as the fundamental question we will, I agree, be forced to argue that more control should be in the hands of the educators. However, and this is the important point, in arguing for these institutional changes which will put more control in the hands of the educators, our grounds *ought* to be that these changes are necessary in order to prevent the adoption of policies that render public education more ineffective than it could be, and in order to prevent tyrannical or totalitarian control over education. In addition, and this is the second important point, the word "ought" in the preceding sentence is a logical *ought,* meaning "must," if rational; it is secondarily, and *only* secondarily, a strategical *ought,* meaning "must, if such advocated changes are to be accorded approval by the majority of Americans."

I STATED earlier that Lieberman's analysis of the logic of the problem of institutional change led him to abandon his valuable insight that the proper approach to educational problems is an institutional approach. Because he regards the question of who should control as fundamental, Lieberman is forced to supply some prin-

[4] Karl Popper, *The Open Society and Its Enemies.* Princeton: Princeton University Press, 1950, p. 122.

[5] Lieberman, *op. cit.,* p. 38.

ciple to be used in the task of delineation between the rights of the educators and the rights of the public.

The principle that he suggests for this job is the familiar one that the public should determine *what* is to be taught, but the teachers should determine *how* it is to be taught. This, of course, is the usual bifurcation between ends and means, but Lieberman gives the old principle a new twist by saying that the ends, or the "what" of education, should be viewed as the "broad purposes of education." "The fallacy," he says, "lies in regarding the *what* as a list of subjects instead of a set of purposes." The means, or the "how" of education, rightly belongs to the profession, Lieberman says, but he adds: "If people were clear that the public should determine the broad purposes of education, then it would be understood that "how to teach" refers to subjects as well as teaching methods."[6]

Now any attempt to use "means and ends," or "what and how" to distinguish between the rights of the profession and the rights of the public is bound to be shaky or ambiguous, because in concrete situations it is difficult to come to any agreement as to what are "ends" and what are "means," or what fits into the category of "how to teach." Lieberman himself is aware of this difficulty, as is evident in the following quote:

> Theoretically, it is possible for the American people to accord the schools a very narrow purpose. Instead of saying that one of the purposes of education is to develop an understanding and appreciation of our democratic heritage, they might say that the purpose of education is to insure that every student can recite the Bill of Rights from memory.[7]

He adds that he would regard such a statement of purpose as a mistake. But why, we might ask, is such a statement of purpose a mistake? One answer seems to be that such a statement of purpose is not broad or general enough to fit in with Lieberman's *a priori* conception of the form that these purposes should take. But if the correct scope and breadth of the purposes of education are somehow already predetermined for the public, then to claim that the public has the right to determine the purposes of education becomes an almost meaningless right. It renders such a right meaningless because part of the job of determining purposes is to determine their scope and breadth.

Lieberman, however, does not see such a restriction on the public as an abolition of their right to determine the purpose of education. He grants the public this right and then proceeds to show how the possibility that the public will determine narrow purposes can be avoided. Such a danger, he says, decreases "as we have a larger and larger community set the purpose." In other words, when the purposes of education are determined on a national level instead of at the local level, narrow purposes would be "manifestly unfeasible." But if we grant Lieberman his prediction that local control will eventually be succeeded by national control, then it is precisely at this point that we become aware that he has abandoned the institutional approach to the problems of education.

How Should We Prevent Tyranny?

An institutional approach to the dangers of a nationally or federally controlled educational system would try to find some way to offset or prevent tyrannical or arbitrary acts. Lieberman seems to be tackling this problem when he says, "The factor that stands in the way of arbitrary federal action is the emergence of occupational autonomy and strong national organizations of employers and employees." The significance of this for education then seems to be that teachers or the teaching profession will act as a countervailing power, as a check on arbitrary federal action or tyrannical federal control. Following through with this institutional approach, one would expect Lieberman to show how the profession will act as a countervailing power. This would have brought him to the next step, which is the necessity for some institutional approach (such as an independent commission) to handle the problem of judicial review of the disagreements between the controlling national agency and the teaching profession. But instead of carrying out this institutional approach, Lieberman ends his discussion by merely reiterating that professional autonomy in educational decisions will solve the dangers inherent in a national system of education.

> Obviously, if the educational program in a centralized system were to be placed under congressional control, or under the control of a politically dominated national school board, the ensuing political melee would be disastrous. But the way out is to realize that the problem is not which public—local, state, or national—should establish the educational program, but how to make certain that it is in the hands of the teachers, where it belongs.[8]

[6] *Ibid.*, p. 62.
[7] *Ibid.*, p. 63.
[8] *Ibid.*, pp. 74-75.

Lieberman has avoided the institutional problem to provide for judicial review of the disagreements between the controlling national agency and the teaching profession. But since he has declared that the job of the controlling national agency is only to issue statements of broad purposes for education, then the possibility of conflict between the educators and a national agency is itself avoided, since all control of education is actually within the hands of the educators. But professional control of education is not an acceptable solution to the fundamental problem of education, since part of that problem is to avoid tyrannical or totalitarian control. In Lieberman's proposals it is evident that totalitarian control still exists. The fact that the control would be in the hands of the experts—instead of in the hands of pressure groups operating at the local level, as is now the case—in no way removes the fact that it would be totalitarian control.

THOSE familiar with Myron Lieberman's earlier work are aware that he has been avidly concerned with the absence of professionalism in education. His comprehensive study, *Education as a Profession,*[9] remains as the best work on this problem to date. In *The Future of Public Education* the author has combined his interest in the problem of professionalism in education with an invaluable insight that the solution to educational ineffectiveness must be brought about through an institutional approach; i.e., through alterations in the power structure. But, we repeat, the combination of these two has forced him to cast his valuable insight into the mold of a theory of sovereignty which vitiates his work.

Lieberman has crystalized the problems of professionalism in education—as have others—by comparing educators with doctors, lawyers, and other "professionals." He has gone farther than anyone else in using these other professions as conceptual models from which educators can learn both what it means to be professional and what necessary changes are needed in order to become professional. In adopting these professional conceptual models Lieberman dismisses any attempt to isolate education as a different kind of profession on the basis that teachers are public employees. "It can be safely stated," he says, "that more unwarranted inferences have been drawn from the fact that teachers are publicly employed than from any other single fact about public education. Teachers ought not to control entry to teaching, should not determine the subjects taught or the instructional material to be used, should not be permitted to bargain collectively, should not have the right to strike, do not need to formulate and enforce a code of professional ethics—the list of *non sequiturs* that invariably follows the 'point' that teachers are public employees constitutes a fairly complete catalogue of what's wrong with American education."

I agree with Lieberman that the above list does constitute a fairly complete catalogue of what's wrong with American education. However, I do not think that the fact that teachers are public employees can be dismissed as not being an important distinctive characteristic of the profession of education.

We must abandon the fruitless practice of looking for conceptual models among the various professions; such endeavors only breed dissatisfaction among teachers and laymen. The former become dissatisfied with such comparisons because the comparisons highlight their low status and prestige; the latter become dissatisfied because from the comparisons they infer subversive attempts to change the American system.

Instead of looking for "conceptual models," public school teachers should become aware of the kind of institution in which they are working. The school district has been legally defined as a corporation.

> Varying terms have been used by the courts to describe the nature of school districts. Sometimes they are referred to or regarded as corporations, especially when so declared by statute. Similarly they have been termed "Involuntary corporations," or referred to as bodies corporate, or bodies politic and corporate. More frequently, school districts have been designated quasi-corporations of a public character, or public quasi-corporations.[10]

If the school district is a corporation, then the members of a school board district are shareholders in that corporation, the school board is the board of directors of that corporation, and the teachers are employees or agents of that corporation. The rights, authorities, and limitations of boards of directors, shareholders, and agents have all been codified in the annals of American jurisprudence.[11]

Of particular relevance to Lieberman's demands for more professional autonomy are the rights and duties of agents that have come out

[9] Myron Lieberman, *Education as a Profession.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1956.

[10] "Schools," *American Jurisprudence,* 47, Article 12.

[11] "Corporation," *American Jurisprudence,* 13.

of the many court cases involving corporations.[12] These, I believe, may provide the legal basis for teachers to engage in the sort of activities Lieberman proposes, i.e., such things as determining subjects to be taught as well as instructional material to be used, engaging in collective bargaining, assuming the right to strike, formulating a code of professional ethics.

If this is feasible, then the strategy of teachers' organizations should be clear. They must secure general recognition of the fact that school districts are corporations by doing all in their power to secure the legal rights of public school teachers as agents of corporations. In this way they can follow the procedures of such an organization as the N.A.A.C.P. Teachers' organizations should back those teachers whose legal rights are being infringed upon and they should carry these cases into the courts as test cases, test cases that cannot but result in greater teacher autonomy.

It has been my first purpose in this paper to pay Myron Lieberman a tribute for having brought to the attention of all of us that the problems of American education must be solved through an institutional approach, through the making of necessary changes in the power structure of education. Secondly, I have tried to show that Lieberman's concern with the question of professionalism led him into a theory of sovereignty which is paradoxical and which constitutes a strategical error. Finally, I have suggested that since the school district is a corporation, then the necessary institutional changes proposed by Lieberman can be accomplished through court action based upon institutionalized legal precedents established in judicial decisions concerning corporations. My concern has been to show that necessary educational changes can and should be made *not* on the grounds of any *a priori* decision about rights to control or not to control, but rather on the grounds that such changes are necessary in order to prevent tyrannical or totalitarian control of public education, and in order to prevent the adoption of educational policies that render education as ineffective as it is today.

[12] "Agency," *American Jurisprudence*, 2, esp. Articles 85-207, 238-344.

Anyone Paying Attention?

► Today defenders of the First Amendment are being knocked off one by one and almost no one is paying any attention, according to Irving Dilliard, now lecturing before college audiences after resigning as editorial page editor of the St. Louis *Post-Dispatch*. There are at least thirty-six persons in the U. S. who either are in jail or on their way after having invoked the First Amendment, which includes the free speech guarantee.

"This is a situation which is undermining the most cherished of our freedoms and is a situation more dangerous in some ways than the McCarthy era," Dilliard says, "for then the opposition had a single target and the hysteria could be more effectively dealt with."

Today's situation "is what we might expect in Franco's Spain, for example, but it is completely alien to the land of Washington, Jefferson, Madison, Tom Paine, Emerson, Lincoln, and Woodrow Wilson," he adds.

Dilliard discusses the First Amendment cases of Warren Barenblatt, Willard Uphaus, and H. Chandler Davis. Davis was dismissed from the University of Michigan faculty, found guilty of contempt of Congress, and sentenced to six months' imprisonment. Davis' special field as associate editor of the *Mathematical Review* was to review research papers done by Russian scholars.

"To make the situation completely ridiculous, the ruling is that he may continue his own mathematical studies but that he may not see any books, articles, or reports from the area of his specialty—Soviet Russia—on the grounds that they might contain Communist propaganda."

Toynbee Issues a Warning

► "In modern times the Western Civilization has been sensationally successful in deliberately and systematically extending the bounds of knowledge and in applying the knowledge of non-human nature, that has been gained in this way, to the practical purpose of increasing human power over man's non-human environment. One of the devices by which these successes have been achieved has been specialization. And there is a temptation to carry specialization to still farther lengths as a possible means of coping with the overwhelming mass of new knowledge that specialization has won for us. At the present time this temptation is reinforced by the new demand of governments and non-governmental corporations and foundations for specialists in natural science and technology, now that technological and scientific knowledge is expected to count for more than military prowess and administrative skill in the arena of international power politics.

"Any state or people that succumbs to this temptation seems likely to defeat its own purpose. . . ."

This quotation comes from the concluding chapter in *Education in the Perspective of History*, by Edward D. Myers, just published by Harper and Brothers. The final chapter was written by historian Arnold J. Toynbee, who helped plan the volume.

BOOKS

for leaders

By Rocket Ship or Ox Cart—We Must Know Where To Go

DEMOCRATIC EDUCATIONAL THEORY, by Ernest E. Bayles. New York: Harper, 1960. x plus 266 pp. $4.75. Reviewed by Irwin Widen (Lambda 1546, Nu Field). The reviewer, a master teacher at the Jirka School of Chicago, is to be a visiting lecturer in educational philosophy at Indiana University this summer.

RECENT years have brought tremendous advances in the state of our technology. We have zoomed into the air age and have blasted off for the space age. Yet, as has been wisely pointed out, a rocket ship is no more useful to man than an ox cart if he does not know where he wants to go.

As it has to other fields of endeavor, technological progress has come to education. Our school buildings have become more functional, our teaching and administrative practices more efficient, and our public-relations techniques more astute. Still, with education as with transportation, advanced means do not of themselves guarantee the attainment of worthy ends.

What should be the ends of education, and what means are appropriate to such ends? These are the basic questions that confront our profession, and they are pursued remarkably well in *Democratic Educational Theory*. The book is described by its author as a "textbook . . . on educational theory or philosophy," and it may be expected to receive serious consideration and a number of adoptions by teachers of theoretical courses; but its value is by no means limited to the college classroom. The book merits the attention of every professional educator and of the more literate laymen who are concerned about school policies.

As Charles H. Percy, president of Bell and Howell and chairman of the Fund for the Advancement of Education, suggested to the recent convention of the National School Boards Association: "Perhaps the greatest hope for us as a people is that we are doing some soul-searching." This book should aid considerably in the soul-searching process. No matter what one has previously studied in educational theory, he is likely to find some different slants in this highly thought-provoking work. Orthodoxies of both the "old" and the "new" education are challenged vigorously. Profound and complicated concepts are made readily understandable through the use of careful logic and straightforward language. The author, a professor of education at the University of Kansas, combines the thoughtfulness of the ivory tower with the earthiness of the wheat field.

Philosophies are traditionally classified into the major categories: idealism, realism, and pragmatism. If one had to choose from among those three names, it would be correct to describe the philosophical orientation of the book as that of pragmatism; but for reasons which he well explains Professor Bayles prefers to term his philosophy "relativism" or "objective relativism." As relativism it stands in clear opposition to the absolutism which the author finds characteristic of both idealism and realism; and the adjective "objective" serves to assure us that the author's outlook bears no resemblance to solipsism. In regard to human behavior and learning, the author subscribes to a configurational or "goal-insight" theory as opposed to the theory of connectionism.

Some words which have favorable connotations are used for more than they are worth. Many of us seem to forget that the attaching of more and more meaning to a word may render it less and less meaningful. Such a fate has at times befallen the term "democracy," and the author's treatment of its meaning constitutes a distinct contribution to the furtherance of educational theory. Through much deliberation the author arrives at a definition of democracy as *"equality of opportunity to participate in making group decisions and equality of obligation to abide by them,* once they are made and until they are revised or rescinded." Thus democracy is not synonymous with all that is good and noble. It is a process, not a product. It is a process which can be used wisely or stupidly, for the elevation of humane values or for their degradation. The author faces frankly the possibility that "by way of democratic process a people may indeed terminate democracy—the door is wide open and held open as long as the definition holds. . . . But the only democratic remedy is to be continually on guard not to adopt policies which, either rapidly or slowly, work toward the demise of democracy. This is why democratic *policy* calls for a nation-wide educational program which improves the reflective capacity and the wisdom of every citizen and prospective citizen to the highest degree possible."

In a chapter entitled "Democracy and Keeping School," the author examines the educational implications of his definition of democracy. Attention is focused upon four topics: control of student behavior, relationships between the educational profession and the body politic, control of student attitudes or beliefs, and the amount of education required by democracy. Each of these topics is handled in penetrating fashion, and many are the statements in this chapter that bear repeating. The following passage is, in the reviewer's opinion, one of the best examples of thought-provoking writing that he has yet seen:

> Thus, we reach the crux of the problem of indoctrination, one of the most vital problems in democratic education. *How can a teacher criticize and guide pupil thinking, yet avoid indoctrination?*

> If we are to teach children *how* to think, we simply have to make them aware of when they are thinking well and when poorly. However, when we have nothing more than agreement with our own thought processes as the criterion for judgment on what is good thinking and what is bad, then we are being as authoritarian and dictatorial as the least benign of despots. The real question is, how can we judge, when a pupil's conclusions are not in agreement with ours, whether he is thinking *not* as well as we, or *whether he is out-doing us?* The latter is indeed a possibility. Moreover, although we seldom think of it, the same question should arise in our minds when pupils come to agreement with us. Are we all thinking as well as we should, or should we stay at it until we all do better? Just how, anyway, shall we know when we have done well enough?

A key concept in the author's educational theory is that of "reflective teaching"—teaching which promotes the reflective study of student problems. This differs significantly from "understanding-level" teaching and differs vastly from "memory-level" teaching. Citing several experiments conducted in connection with master's theses under his advisorship, the author suggests that reflective teaching can be superior to nonreflective teaching not only in regard to the development of "self-reliance in the face of difficulties" but also in regard to conventional subject-matter achievement. But, one may ask, is not a teacher hamstrung if placed in a school which is not dedicated to this type of teaching? The author's answer is hopeful: " . . . *many benefits of reflective teaching may be achieved within the framework of courses and of school organization already in existence.* No individual teacher has to upset a given school or its curriculum in any way, yet he can greatly improve his own teaching."

But will not one endanger his position by teaching reflectively? Again the author is optimistic: " . . . it is to be expected that *genuinely reflective, democratic teaching tends not to stir up a community even though controversial matters are considered* because all conclusions and convictions reached by class members are those which the studies indicate are necessary; not those which a teacher brings to class and proceeds to indoctrinate, whether in light of evidence which is favorable or unfavorable." Of course, reflective teaching, while it may not cause one to *lose* his job, is of itself no guarantee that one will *keep* his job; and on the subject of job-holding the author offers some sensible advice: "Ill-considered and thoughtless actions, exaggerated claims or much discussion of what one is doing or attempting to do, exhibitionism or rambunctiousness, unnecessary interference with the rest of the school, failure to maintain 'discipline,' going out of one's way to be argumentative, boasting of better than ordinary results, and other breaches of what is ordinarily thought of as good taste may well promote situations which quickly become intolerable. But to go one's way, quietly and ably and in keeping with democratic procedure, will go far toward enabling one to choose for himself whether and when he will go to another position."

The capstone of the author's educational theory may be found in his chapter on "American Educational Purpose and Program." The following two paragraphs serve well to summarize his conclusions:

> To summarize the conclusion which our thinking has so far reached, we can say that American education *ought* seemingly to *promote development of more adequate and more harmonious student outlooks on the life of which they are a part, and heightened capacity to reconstruct outlooks independently.* This conclusion seems to be the one to which we are logically committed if we assume, first, the democratic commitment and take that to mean equality of opportunity to participate in the making of decisions and equality of obligation to abide by them, and second, the scientific commitment as an axiological or value-principle and take such commitment to mean adequacy and harmony of outlook in light of obtainable data. It is *democracy* which requires *independent* capacity to construct and reconstruct outlooks, and *scientific* commitment which requires *adequacy and harmony* of outlook. But, in keeping with both democracy and the method of science, neither requirement is a static one. As the world grows and as people grow, previously adequate outlooks become inadequate, and harmony achieved on old bases sometimes becomes disharmonious when the new also has to be encompassed. Hence, the capacity for progressive and continuous "reconstruction of experience" (Dewey's own expression) is the keystone of the arch of habits whose formation is a requirement of democratic education.
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> . . .
>
> Our next step is to state the educational *program* which seemingly grows out of our statement of *purpose.* It is to *promote reflective studies of problems which represent not only inadequacies but also disharmonies in student outlooks on the life of which they are a part.* For to promote *adequacy* of outlook, we must begin with *inadequacies;* to promote *harmony* of outlook, we must begin with *disharmonies;* and to promote *reflective capacity,* we must provide students with repeated opportunities to *study problems reflectively.*

While this review has attempted to trace the main threads in the fabric of the author's theory, it has not yet indicated the breadth of his work. Chapters are devoted to the nature of modern science, the meaning of appreciation, religion and character education, the appraisal of pupil progress, and "John Dewey and Progressivism"; and each of these contains valuable, insightful discussion.

On page 241 appears the sentence: "If, in the foregoing pages of the present book, especially Chapters 2 and 3, we have not succeeded in making clear that the kind of psychological theory supported by Dewey is not fundamentally different from that of Thorndike, then we surely have failed in communication." To one who has read the foregoing pages of the book, the error in this statement is apparent,

for the author has taken great pains to make clear his conviction that the psychological outlook of Dewey *is* fundamentally different from that of Thorndike. As the author himself has verified for the reviewer, his intended meaning can be understood if the sentence's second "not" is deleted.

The subject matter of *Democratic Educational Theory* is highly controversial, and a number of its statements should evoke some disputation. Neither this nor any other book can lay just claim to being the definitive work on democratic educational theory. If the reader expects to find in this book all the answers to all our theoretical problems, he is doomed to disappointment. What the reader *can* expect to find in this book, however, is a grand adventure in thought—a rendezvous with a mind that is profound, perceptive, and creative.

A Comparison of Two Intellectual Giants

FREUD AND DEWEY ON THE NATURE OF MAN, by Morton Levitt. New York: Philosophical Library, 1960. 180 pp. $3.75. Reviewed by Frederick C. Neff, *professor of education,* Wayne State University.

WHENEVER two giants of human thought appear in the same generation the question often arises as to what they had in common, both between themselves and by way of their intellectual heritage. Holding to the thesis that John Dewey and Sigmund Freud "fought for the understanding of the nature of man from complementary, not opposing positions," Morton Levitt, of the Wayne State University College of Medicine, has set himself the task of delineating their intellectual antecedents and their areas of agreement and disagreement. The thesis is tenuous, and one suspects that Levitt's intrigue with his topic exceeds the warrant of his hoped-for conclusion. Nevertheless, the tour de force of the undertaking will captivate the reader, who will be willing to go along with Levitt if only for the interesting sidelights and side trips along the way.

The biographical sketches reveal some of the incipient attitudes of the two thinkers. As a youngster Dewey was interested in reading "almost anything but schoolbooks." Much later, his social emphasis in psychology is traceable to the influence of Hegel; but, in Dewey's words, "gradually I came to realize that what the principles actually stood for could be better understood and stated when completely emancipated from Hegelian garb." His study of Huxley Dewey describes as having led him "to desire a world and a life that would have the same properties as had the human organism in the picture of it derived from study of Huxley's treatment." As for Freud, he never felt "any particular predilection for the career of a physician." "I have no knowledge of having had any craving in my early childhood to succour suffering humanity. My innate sadistic disposition was not a very strong one, so that I had no need to develop this one of its derivatives."

Having painstakingly traced some historical influences upon Dewey, Levitt tells us that, "selectively, Dewey took from Plato, Kant, Comte, and Hegel for the hull and deck. Darwin and James fairly launch the ship, while [G. Stanley] Hall, Morris, and Mead gave it its final direction." Levitt regards Plato, Darwin, Shakespeare, and Goethe as Freud's greatest historical progenitors, while among his contemporaries the influence of Fechner, Helmholtz, Brücke, and Breuer appears to have been most significant. Shakespeare and Dostoevsky seem to have provided illustrative clinical material to draw upon, while Goethe was a direct psychological influence. Dostoevsky's criminal portrayals, according to Freud, "proved that the author identified himself with them [criminals] on the basis of similar impulses . . . [and that it is valid] to count Dostoevsky among the criminals."

Freud's system is described as consisting chiefly of the instincts, with the libido at the core; the psychic apparatus, made up of the id, ego, and superego; sexual genesis, the crucial stage of which is the Oedipus conflict; the mental qualities of the conscious, unconscious, and pre-conscious; dream interpretation; and psychoanalytic technique, understood by Freud as a "pact" in which the analyst and the weakened ego of the patient engage in order to resolve the conflict between "the instinctual demands of the id, and the moral demands of the superego."

Obviously, the philosophic system of Dewey and the psychological system of Freud resist comparison, and Levitt admits the necessity for drawing quite a bit from early Deweyan psychology in order to bring their views to common terms. But the early Dewey, with his apparently closer kinship with Freud, was a long way removed from the later Dewey. Levitt recognizes this fact and cites an early Dewey passage to prove it: " . . . every concrete act of knowledge involves an intuition of God." From an out-and-out faculty psychology Dewey moved finally to functionalism—hence he could accept neither the psychoanalytic reliance on the instinct concept nor the tendency toward a reification of constructs. Moreover, as Levitt points out, Dewey

was optimistic and forward-looking, whereas Freud was "more respectful of antecedents, and hence less optimistic about the possibility of change." Despite these major schisms, Levitt prefers to believe that "the difference between Dewey and Freud was neither biological nor constructional in origin, but rather had to do with the matter of emphasis."

What remains that Dewey and Freud had in common appears to be very little. Each seems to have regarded the other with studied indifference, Freud's writings omitting any reference to Dewey and Dewey's making virtually no mention of Freud. It is probably no more than coincidential that each was critical of both communism and religion. And both confided very little in their readers regarding their personal lives, thus adding to the difficulties of biographers.

Although Levitt writes in very readable prose, the book itself suffers from the usual editorial lapses to which Philosophical Library publications seem to be prone. These include misquoting of important titles (*Democracy in Education* and *Problems of Man* [sic]), occasionally faulty sentence formation, an anachronism, and some undocumented quotations. The treatment of both Freud and Dewey is perhaps too consistently sympathetic to be truly critical. Occasionally discussion turns, not to trivia, but to matters somewhat irrelevant to Dewey-Freudian comparisons and contrasts. Despite these shortcomings, the book offers a searching analysis and a scholarly insight regarding the nature of man as viewed by two of the profoundest thinkers of our time. It is an important contribution to the fields of psychology, philosophy, and education.

Economics and Finance For School Leaders

FINANCING THE PUBLIC SCHOOLS, Roe L. Johns and Edgar L. Morphet. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1960. 566 pp. Reviewed by Russell T. Gregg, *professor of education,* University of Wisconsin.

IN these days of rapidly increasing school enrollments and deepening concern for improved quality in public education, the problem of providing adequate financial support for public schools is of paramount importance. In our democratic society, where the public schools belong to the people, this problem will not and cannot be solved by school administrators alone. The citizens will make the basic decisions about schools and the financing of them. This fact points not only to the necessity for school administrators themselves to be effective leaders in the field of public school finance, but also to the need for them to promote intelligent leadership on the part of many other persons, both in the profession and in the lay public. To do this, administrators will have to have a fundamental understanding of how decisions are made in a democratic society as well as much specific knowledge about the conservation and utilization of funds, facilities, and people in educational organizations. Moreover, these administrators must have an understanding of the basic concepts of economics and of public finance.

A book has recently been published by two recognized authorities in school finance, Professors Johns and Morphet, which is intended to contribute to the development of educational leaders such as described above. It promises to be fruitful in this respect. It is comprehensive, scholarly, and well organized and written.

The chapters of the book may be classified into three groups. The first seven chapters deal with fundamental aspects of school finance which have important implications for all types of school districts and for all levels of government. These chapters are entitled: (1) Finance and the Educational Program, (2) The Problem of Support, (3) The Economics of School Finance, (4) Trends in Demand and Expenditures for Public Education, (5) Taxation and Sources of School Revenue, (6) Inequalities in Opportunity, Ability, and Effort, and (7) Legal Basis for School Finance.

The next six chapters view the problems and practices of financing public schools from the local, state, and federal levels of government. The chapter titles are: (8) Local Financing of Public Schools, (9) State Provisions for School Support, (10) The Foundation Program, (11) State Provisions for Financing Capital Outlay, (12) Financing Special Services, and (13) Responsibility of the Federal Government for Financing Education.

The final six chapters treat the operational problems of the financial administration of public school systems. These chapters include: (14) The Development and Administration of the School Budget, (15) Finance and Personnel, (16) Financial Accounting, (17) Spending and Safeguarding School Funds, (18) Protecting Property and Persons, and (19) Central Services of Business Administration.

Current problems and issues which are relatively controversial in the light of our present state of knowledge and experience, but about which, nevertheless, decisions must constantly be made in the world of reality, are discussed as the final section of each chapter. These problems and issues have been carefully selected, and their nature clearly identified. No final answers are given, although the authors do not necessarily try to conceal their own points of view. Teachers of school finance who wish to stimulate students to become cognizant of, think about, investigate, and discuss real problems in school finance probably will be pleased with these sections of the book. On the other hand, teachers who want their students to have some explicit an-

swer to all problems of finance may feel that these sections do not serve their purpose well.

The authors of the book accomplish their major purposes to a marked degree. Comprehensive, authentic information is well organized and presented with respect to the major problems of school finance. Basic concepts of economics and public finance are clearly presented and interpreted. The processes of leadership, including the implementation of decision-making, with regard to problems of school finance receive considerable emphasis throughout the book.

The Johns-Morphet book can serve a wide audience effectively. Persons unsophisticated in the field of public school finance will find it interesting as well as highly informative. For the practicing school administrator, it will be an invaluable source of up-to-date basic information and concepts about most of the problems of school finance and business administration for which he has the responsibility for providing leadership. Present and potential scholars in the field will find the book a most useful reference, especially those chapters dealing with the economics of school finance, the trends and expenditures for public education, and taxation and sources of school revenues.

Among the most challenging concepts of the book are those dealing with relationships of quality educational opportunities, including the required high-level expenditures, to the economic well-being of society as a whole. Public expenditures to satisfy legitimate human needs, of which education is the most conspicuous example, are true investments for promoting the nation's productivity and economic status. For these concepts, and the information supporting them, to say nothing of its many other qualities, the book is unreservedly recommended.

A Program To Save City Schools from Deterioration

► Robert J. Havighurst, University of Chicago professor of education, has called for a four-point program of "drastic changes" to save public schools from further severe deterioration in the nation's great cities. The program:

1. A set of academic high schools, each serving a large district. These schools would be open to all who can qualify as capable and interested in high-school graduation.

2. A group of vocational-type high schools, admitting boys and girls who have average or better-than-average school records and are interested in vocational training.

3. Work-study programs for boys and girls, commencing at the seventh and eighth grades. These programs would be designed for "non-learners and slow learners" and would "open a pathway to adulthood parallel to the high school."

4. A special program in kindergarten and primary grades for children from "culturally deprived" families. The program would be aimed at reducing the number of slow learners and non-learners in the years to come.

Havighurst presented the plan in an address before a Chicago Citizens School Committee meeting attended by some 600 delegates in early May. He said, "Democracy in the schools of the great city of today does not lie in putting all kinds of boys and girls, bright and dull, culturally privileged and culturally deprived, Negro and white, in the same classroom or in the same school building. This would be impossible even if it were desirable. Democracy lies in providing opportunity for growing up successfully and happily, opportunity that is geared in the child's ability, his performance in school, and his cultural and personal needs."

A Compilation of Data For Accurate Appraisal

► *The Concern of All* is an extraordinary compilation of data necessary for an accurate appraisal of the needs of American education in the next decade. Composed of tables, graphs, charts, and a minimum of editorial matter, the little pamphlet (64 pages) has been made available by the Tri-State Area Study Council, University of Pittsburgh. Its author is Maurice J. Thomas, professor of education at the University of Pittsburgh. He has drawn data from numerous sources, including the U. S. Office of Education, NEA Research Division, and the commissioners of education in Alaska and Hawaii.

Says Finis E. Engleman, executive secretary of the American Association of School Administrators, in a brief introduction: "Within the pages of this book, those interested in the quality of education and its support will find a veritable gold mine of helpful facts and wise observations."

The pamphlet may be ordered from Dr. Thomas by addressing him at the University of Pittsburgh, Pittsburgh 13, Pa. Single copies are 75¢. Quantity discounts are generous.

Those Self-Righteous Machines

► A new quarter-million dollar Burroughs 220 computer at Cornell University has demonstrated not only that it can win games of tic-tac-toe against human opponents, it can catch the opponents in cheating. One of its taped remarks: "Naughty, naughty—you did not play fair last time. If you promise not to cheat we can play again."

There are now about 2,000 researchers familiar with the use of computers in this country, according to J. Barkley Rosser of Cornell, whose graduate students use the Burroughs without charge, although it costs $150 an hour to operate.

Individualism for the Gifted Child

Here is a list of sixteen musts for dealing with the gifted child as an individual, developed from the experience of Utah's State Committee on the Gifted Child.

By **ROBERT D. MacCURDY**

SINCE the beginning of the atomic and space age, Americans have had to accept the serious challenge of other nations for world leadership. The increasing use of the products of science and technology as tools for political power has increased our interest in scientifically trained and gifted people. For many generations we survived comfortably by exploiting natural resources and mass producing goods. Our mass education program in the public schools reflected our satisfaction with this way of life. But suddenly the old procedures are no longer adequate. We are beginning to recognize that gifted people are rare individuals whose discoveries and developments are desperately needed by the whole population. Yet one still hears such suggestions as: "It's undemocratic to segregate the gifted," or "Let him use his great gifts to help himself." Even among those who realize that we can no longer follow the customary patterns, no standard key is accepted. We hear calls for "acceleration," "homogeneous grouping," "enrichment," "special teachers for the gifted."

Recently the writer has been privileged to serve as a consultant to the Utah State Department of Education's Committee on the Gifted Child. This committee is preparing a guide for teaching the gifted child. The committee is composed of many persons with wide experience in coping with problems of gifted children. The semi-final draft of its work has produced what appears to be a promising new approach to the problem of dealing appropriately with giftedness in the public schools. The statement includes a philosophy and a related policy and action program. The committee wished to verify this contribution by testing it against the literature and against the teachings of the best professionals in the field. This service the writer agreed to perform. The findings of this study form the substance of this article.

MR. MACCURDY *(Beta Omicron 269) is head of the Science Education Center, Utah State University, Logan.*

THE gifted child is found so infrequently in the general population that we consider him to be a scarce individual. When we study his characteristics, we find qualities which distinguish him not only from the great mass of children but from other gifted children as well. These facts argue for a program of individualization. He is, however, a member of society and this society has produced his civilization. Society has made an investment in him and expects a dividend on this investment. He has special potential to promote that society's further growth and development.

How can the somewhat divergent requirements of these facts of life be adjusted? The solution that is suggested here is a fair compromise. It provides for many special activities which are suitable for the superior and the gifted but which at the same time are integrated into the group structure and program of society which we call the school curriculum. In order to provide for "individualism" the schools should:

1. Provide the service of guidance counselors who will test and measure, guide, counsel, and provide the information which will enable superior students to make decisions for themselves.

2. Provide a functional records section that will enable students and staff to know where they stand at all times.

3. Provide master-teachers whose breadth of knowledge, skill, and experience will enable them to help many individual students operate on a wide span of learning activities and at varying speeds and abilities.

4. Provide a varied curriculum of learning experiences so that individuals can adjust to changing needs and goals.

5. Provide a school-wide physical environment and attitude favorable to learning and scholarship for students, teachers, and administrators.

6. Provide an adequate supporting staff of people to free the teacher of all non-teaching assignments that rob him of time, energy, and enthusiasm for creative and inspirational teaching.

7. Provide for visiting consultants and super-

visors for in-service growth, professional organizations, faculty exchange, democratic administration, rewards, and recognition so that the faculty will deliver a constantly improving professional service of teaching for the superior and the gifted students.

8. Provide a stimulating, interesting, multipurpose classroom-laboratory-workship-library-museum-conference kind of classroom where a variety of individual activities are possible at one time.

9. Provide adequate physical facilities where individuals may work without disturbance, such as: corners, alcoves, small rooms, workshops, laboratories, separate tables and chairs, carrells, study units, partitioned or curtained sections, and listening booths.

10. Provide a variety of furniture and equipment such as tables and chairs, workbenches, sinks, sandtables, aquaria tanks, display cases, office machines, cabinets, file cases, storage cabinets, office supplies, calculators, audio-visual aids, charts, models, apparatus for photography, art, tracing plates, and viewgraphs.

11. Provide an adequate classroom library of reference books, manuals, magazines, dictionaries, pamphlets, leaflets, brochures, guides, and encyclopedia so that students may quickly seek and find needed information.

12. Provide adequate basic supplies, tools, and raw materials so that an individual may develop his work along specialized lines by his own fabrication.

13. Provide adequate kits or sets of learning materials so that an individual or small group may study a group of concepts easily with all the necessary materials organized in a single box.

14. Provide a battery of units of work in files so that students may proceed at their own pace from unit to unit.

15. Provide a battery of mastery or achievement tests which are a part of the units in each subject area. Students can find their scores on these standardized tests to plan work or check accomplishments.

16. Provide a successful public relations program to keep the community informed of the progress of the system, the school, the class, the teacher, and the student in such a way that the public will approve and support this dynamic program.

A BRIEF review of the history of education will reveal that the schools have fluctuated in cycles between systems of individual teaching to mass methods since the days of the ancient Hebrews. The system described above most nearly resembles those advocated by Burke, Washburn, and Parkhurst, but modernized and placed in a bright new school setting. (It has been described in more detail by the writer in another article.[1]) Thus the record of history reveals that there is nothing new about this system. Yet there seems to be no consistent swing toward it at present. Recently the American Psychological Association completed a survey of sixty colleges and universities in America. Descriptions of the courses that thirty of them were offering on "Teaching the Gifted Child" were secured. Among these course descriptions were listed objectives, problems, philosophy, suggested activities, and the like. It was interesting to note that only one suggested treatment by the system we have called "individualism." Immediately the question is raised, "Why is this so?"

Perhaps it is because today we are living our learning and teaching lives in the middle of a mass-treatment period related to such facts as overcrowded schools, teacher shortages, audio-visual aids, government grants, television, standard brands, textbook approval committees, standardized achievement tests, and our label- or degree-prone society. There is little room, time, or money to be had for the individual, even though we give him lip service in our political discussions. In such a milieu, it is no wonder that such a method as "individualism for the gifted child" has been overlooked.

Two significant questions remain. First, is it possible for society (a mass group) to produce and sustain a system of individualism which is contrary to its own fundamental of collective action? Second, if such a system is created, applied, and sustained, will it not inevitably lead to greater application of features of the "individualistic" system to larger groups until it becomes the new universal system for all students in tomorrow's school?

In any case, a system of individualization for the gifted child has been rediscovered from the pages of history in the State of Utah. It appears to be a solution to some of the difficulties of educating that rare and precious person, the gifted child. The system may become tomorrow's standard method for all students.

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[1] MacCurdy, Robert D., "Educlinical Maturation and Its Implications for Professionalism and Ethics," *Educational Horizons*, Vol. 36:4, pp. 201-206, Summer 1958.

► Recommended reading: Richard I. Miller, "Admiral Rickover on American Education," *The Journal of Teacher Education*, September, 1959. Reprints are available from the Defense Commission, NEA.

Keeping Abreast in Education

Manpower Challenge of the 1960's

► The U. S. Department of Labor, in *Manpower: Challenge of the 1960's,* poses the greatest ten-year challenge the U. S. has ever faced in education and training of the American people. Some pertinent statistics:

Increase in population from 180 million to 209 million, or 15 per cent.

Increase in the labor force from 73.6 million to 87.1 million, or 20 per cent.

Increase in high school students from 9 million to 13.5 million, or 50 per cent.

Increase in college students from 3.8 million to 6.4 million, or 70 per cent.

But there is more to the story than statistics. The whole employment structure will be different. Although 13.5 million more jobs will be needed, machines will cut down job possibilities in production industries. The trend toward white-collar jobs will continue; so will the demand for skilled manual workers. The standstill in unskilled jobs will have the effect of a decline. Predicted industrial growth will provide the greatest number of jobs in professional and technical occupations, with sales and clerical employment next.

Workers under 25 years of age will number more than 20 million, 46 per cent of the growth in the labor force. Those 45 or older will make up 20%. Women will make up a third of the labor force.

No Break in the Teacher Shortage

► No diminution in the national shortage of 135,000 qualified teachers. This is the conclusion reached by Ray C. Maul, associate research director for the NEA, in the thirteenth annual *Teacher Supply and Demand in Public Schools* report. Although there will be an increase of 8.3 per cent this year in the number of college graduates qualified to teach, rising school enrollments absorb the extra number.

Men comprise 38.3 per cent of the incoming group of teachers, reflecting, in part, the fact that greater numbers of teachers are prepared for high-school careers. In the existing corps of teachers, 27.6 per cent are men, according to Maul.

There are encouraging increases in fields where shortages of qualified teachers are most urgent: science, 26.4 per cent increase; foreign language, 21.1 per cent; mathematics, 31.9 per cent. Increases above average were noted also in English and commerce.

Yardsticks for Early Action

► Heads of fifty-nine national organizations discussed national goals in education at a conference called by the U. S. Office of Education on April 12. Participants approved two major goals proposed in an Office of Education booklet: 1) to put a professionally qualified and competent teacher in every classroom, by boosting salaries, improving selection, pre-service and in-service programs; 2) to secure by 1964 satisfactory housing for every school child.

By 1963 salaries would be raised to a point 50 per cent higher than in 1958, compressing into a five-year period an increase that would be achieved in twelve years at the present rate. Further increases would be keyed to competing occupations.

According to Commissioner L. G. Derthick, the goals constitute "a yardstick beside which proposals for action—local, state, and federal—may be examined."

JD Leads All the Rest

► Elmo Roper reports that people in the U. S. think the increasing amount of juvenile delinquency is a more serious moral problem than any one of eleven other issues which have received considerable attention recently.

The leading problems, by per cent of those who consider them serious: juvenile delinquency, 89%; dishonest labor leaders, 88%; government officials accepting bribes, 81%; policemen taking graft, 74%; school segregation, 71%; advertisers making false claims, 67%; international disarmament, 66%. Last two items: rigged quiz shows on TV, 41%; disc jockeys taking money from record companies, 34%.

The Schools in Popular Esteem

► Another Roper report deals with popular opinion with regard to the quality of the job local schools are doing. Roper asked this question: "In every community, the schools, the newspapers, the local government, the television stations, each has a different job to do. Would you say that the local schools are doing an excellent, good, fair, or poor job?" Then the same question was asked for each of the other four. The results:

	Excellent	Good	Fair	Poor	Don't Know
Schools	20%	44	21	5	10
Newspapers	14%	50	25	5	6
TV stations	11%	48	26	6	9
Local gov't.	6%	38	32	11	13

New Predictor of Male Scholarship

► A new personality test has been devised to predict how good the grades of male college students will be. Its author, graduate student Gerald L. Hershey, developed it by eliminating all but thirty-eight items from 1,000 used in various personality tests.

Hershey and his adviser, Henry C. Smith, professor of psychology at Michigan State University, first selected items shown to bear a relationship to grades. These were then given to 110 male M.S.U. students and the responses analyzed according to each student's I.Q. and his grades. Then only those questions were used which correlated positively with grades but bore little or no relationship to I.Q. Since intelligence-type tests are grade predictors themselves, Hershey wanted to find only items which brought out something separate from intelligence.

With the number of items at thirty-eight, the test was given to 140 other male students. A high relationship to grades and a near zero or negative relationship to I.Q. emerged. And none of the students, Hershey notes, was able to guess the purpose of the test.

Some of the items seem a bit odd, but they discriminate. Examples: "Peeling onions very quickly brings tears to my eyes" and "I do not like to see women smoke." Good students usually respond "true" to both.

Another more obvious predictor: "I rather often do worse at things than I expected to do." Students with good grades usually say "false."

The test doesn't work with girls, Hershey says.

Help for College Student Sit-ins

► Boston University faculty members have initiated a special scholarship program to aid Southern students expelled from college because of non-violent anti-segregation demonstrations.

Explaining this action of the faculty senate, J. Philip Mason, professor of chemistry, said: "Many of these students, both Negro and white, are praised by their college teachers, their fellow students, and others as among the most able, responsible, and conscientious young people they have known. . . . Indeed, because of their superior intelligence and their sense of responsible leadership, they have been actively concerned with supporting Negro protests against the violation of civil and human rights, and with directing such protests into useful and non-violent channels of expression."

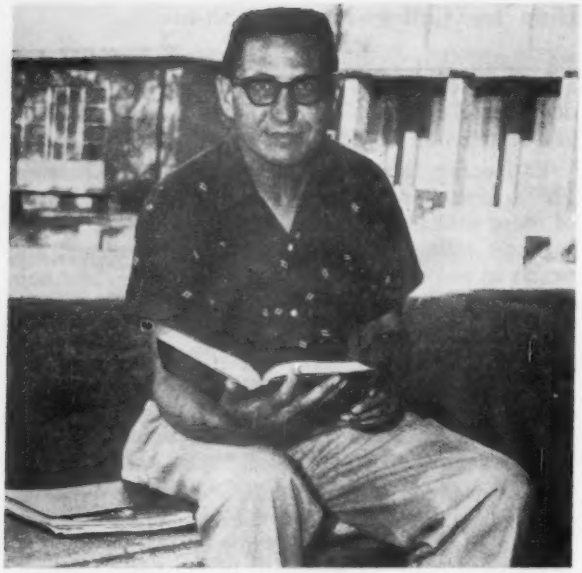
Mason added that because so many of these students have limited means, their prospects of continuing their education are dim unless others help them to transfer to Northern institutions.

Combatting C of C Propaganda

► A paragraph-by-paragraph answer to "The Real Crisis in Our Schools—Federal Domination," an article which appeared recently in *Nation's Business*, the Chamber of Commerce magazine, has been prepared by the Division of Legislation and Federal Relations, NEA. Schoolmen whose patrons have been adversely influenced by the *Nation's Business* article (April, 1960, issue) will wish to secure copies of the NEA analysis.

They Led PDK's 2nd Educational Research Symposium

Six of these men, the nation's top theorists in research design and analysis, presented major papers at Phi Delta Kappa's Second Annual National Symposium on Educational Research, held at the University of Minnesota, March 24 and 25. A book including their papers and discussions in which they and ten discussants participated will be published by PDK this fall. Rear, l. to r.—Julian C. Stanley, Univ. of Wis.; Francis G. Cornell of Englehardt, Englehardt, Legget and Cornell, educational consultants; Raymond O. Collier, Jr., Univ. of Minn.; E. F. Lindquist, symposium chairman, State Univ. of Ia. Front—Walter W. Cook, dean, Coll. of Ed., Univ. of Minn.; S. B. Sells, Texas Christian Univ.; Leslie Kish, Univ. of Mich.; and Oscar Kempthorne, Ia. State.



Henry Toy, Jr., above, was awarded Phi Delta Kappa's first Lay Citizen's Award at George Peabody College for Teachers on May 25 in recognition of his distinguished contributions toward improvement of American education.

Toy Becoming a Teacher After Ten Years as Lay Leader For Improved Schools

One evening back in 1947, Mrs. Henry Toy, Jr., asked her husband to substitute for her at an Oak Grove, Delaware, Parent-Teachers Association meeting being held to discuss higher teachers' salaries. (Mrs. Toy wanted to take part in a bowling tournament that evening.)

That was the start of a career intimately connected with one of the greatest surges of informed lay interest in the public schools that the United States has ever witnessed.

Henry Toy, then a rising young executive with the du Pont Company, expressed his view that night that teachers' salaries should be generously increased, and he wound up as chairman of a committee to study the subject, not only in Oak Grove but throughout the state. Within two years, with the help of the Delaware Congress of Parents and Teachers, Toy formed the Council for Delaware Education. It began a dramatic and successful campaign to improve the state's schools. Toy's success caught the attention of a national group of similar interests, organized at the suggestion of James B. Conant, then president of Harvard. In August, 1949, Toy was named executive director of the new National Citizens Commission for the Public Schools.

By 1959, this group and its successor, the National Citizens Council for Better Schools, had involved thousands of lay citizens in 41 states in a broad, constructive program of school improvement. From 17 known citizens committees operating in the U. S. in 1949, the movement grew to 18,000 local groups. Today, organized citizen participation in school affairs is generally regarded as one of the most significant developments in education since our system of free, universal education was born.

Because it was believed that the council's first objective, to create interest, had been accomplished, the Citizens Council for Better Schools discontinued operation on its tenth anniversary last August. But Henry Toy was not through with education. He did not return to his business career. He enrolled, along with Mrs. Toy, as a student in education at George Peabody College for Teachers, which he knew to be one of the outstanding institutions of its kind in the nation. Although Toy has not announced his plans following graduation in 1961, educators look for further important contributions to professional education from a new professional educator with a unique background of lay participation.

The Time Is Now, Says Corey

► Theoretical experts and practical practitioners in government relations and economics should begin now, ignoring traditions, to work out a blueprint for a national program of school support involving the systematic integration of local, state, and national resources.

This idea was expressed at the National Conference on School Finance Problems held at St. Louis in April. Its proponent was Arthur F. Corey, executive secretary, California Teachers Association. Corey feels that the time has come for a national study of problems involved in integrating large-scale federal support into state systems of school finance.

States should not be required to follow this plan, Corey said, but might be encouraged by it to use federal funds with wisdom. Also, he suggested, it is time for a reinterpretation of the concept of "local control," often a deterrent to district reorganization, forcing an inadequate program on children and making impossible any real synthesis either in the educational program or in its financial support.

Merit Scholars Choose Teaching

► In a release dated April 27, the National Merit Scholarship Corporation announced the names of some 1,000 young men and women who have been offered Merit Scholarships. Among them are 644 males and 152 females who have made career choices. Only forty-three, or 7 per cent, of the young men chose teaching, whereas forty-nine, or 26 per cent, of the girls made this career choice.

Because it is difficult for a student who has not had considerable mathematics, physics, and chemistry to pass the Merit Scholarship examinations, and because a higher percentage of boys than girls study these subjects in high school, the ratio of male winners is high. The same factors also account, probably, for the fact that nearly half of the group planning to teach will major in math and science in college.

Kansas Merit Scholars Study

► A comprehensive study of 4,675 Kansas high-school seniors who took the N.M.S. qualifying test in 1958 has been published by the School of Education, University of Kansas, Lawrence. Its authors, A. W. Dirks and Kenneth E. Anderson, compared characteristics of a random sample of 1,028 students who did not take the exams with the same characteristics in those who did.

Some Catholic Education for All Catholics?

► The ideal of Catholic education has been, "Every Catholic child in a Catholic school." Yet the greater the Catholic school population grows, the farther Catholics seem to be from this ideal. By 1970 between six and seven million children will probably be enrolled in Catholic elementary and secondary schools, but this will be less than half the Catholic school-age population.

Some 17,000 delegates and visitors at the Easter week convention of the National Catholic Educational Association discussed possible new patterns in Catholic education. Many thought that the new aim should be to provide some years of formal Catholic education for all, preferably on "the more influential levels of schooling." This might mean a drive to develop Catholic junior colleges. It is now estimated that by 1970 only one out of four Catholics will be enrolled in Catholic institutions of higher learning, if a new pattern is not established.

Interest Grows on the Testing Front

► To help parents understand the mysteries of testing, South Euclid-Lyndhurst Schools, South Euclid, Ohio, have developed a special eight-page booklet for parents of junior high-school pupils. An explanation is given for each test administered. The center-spread is filled out by the teacher and counselor to show the student's test results and how they compare with the eighth-grade average in junior high.

Also on the testing front, the *Nation's Schools* has polled a sample of U. S. school administrators to see what they think about the fear that test-makers can exert such control over the curriculum that they may eventually standardize it. Some 52 per cent believe that such outside control is exerted; 69 per cent say this is especially true where the testing programs are linked to scholarships. Some administrators were concerned that the public will get too curious about how students fare in pre-college tests such as those administered by the new American College Testing Program and the old College Entrance Examination Board.

Shortly after standardized tests were given this year at Center School, Woodbridge, Conn., parents were invited to attend explanations of their purpose. Half of the parents attended.

NCA Considers Accrediting Junior Highs

► Members of the North Central Association of Colleges and Secondary Schools, a 19-state group, have voted in favor of the cooperative development of a voluntary program of accreditation for junior high schools by the NCA. The Commission on Secondary Schools has charged its administrative committee to work out next steps.

* * *

► With a new state sales tax, Kentucky has upped teacher salaries for next year by as much as $900.

S R BONDS

Dear Editor:

I have just finished a careful reading of the March, 1960, KAPPAN. It is a thrilling issue. Educators should really buckle down to a thorough study of the challenges set out in these articles. Why not initiate a year's series of conferences in PDK chapters over the country designed to study the ideas in this issue? . . . —EUGENE C. SEUBERT, *past pres.*, Beta Field, 5802 Bartmer, St. Louis 12, Mo.

Dear Editor:

Mr. McIntyre [in "The Trouble with Submarines," April KAPPAN] has very aptly (though inadvertently) put his finger upon the problem of modern education. The Navy Department must take the products of our educational system and minimize for them the psychic traumata of confinement in underseas craft. Whereas Jules Verne considered that the most effective way to make the monotony of confinement tolerable was to provide the finest products of his culture, it is apparent that these would hardly satisfy a generation which has not been taught to read intelligently or to appreciate fine art and music. For them, we must trade two movies a day for great books, pinups for fine art, and a juke box for classic music. We can hardly blame the submariner for this. He has a function to perform in military defense, and he must make do with the human tools he has. That these tools have been inadequately developed, he can only deplore, as has Admiral Rickover.—N. B. KURNICK, M. D., *member board*, Garden Grove School Dist., Los Angeles.

Dear Editor:

Your May issue brings together some of the most useful and stimulating statements on the teaching of English that I have ever seen. I was especially attracted by the humorless but thoroughly lucid article by David Adams. Mr. Adams takes all the fun out of controversy, however, by his persistent delineation of issues at stake as opposed to the much more common warming of the feelings involved.

May someone who is not himself a professor of English ask Mr. Foley for his evidence of deterioration in the English of our college students? In fields with which I am more directly acquainted, I find that comparisons with a mythical past are much less useful than with a desirable present state. Few will dispute that the English of our college students is poorer than we commonly wish and perhaps even than is possible to our educational organizations without radical reform. This, however, is a different matter entirely from whether it is, in fact, poorer than that of previous generations of college students.

I look forward each month with increasing pleasure to your magazine.—ARCHIBALD B. SHAW, *editor, OVERVIEW*, 470 Park Ave. S., New York 16.

A Phi Delta Kappan . . . And What He Reads

THE "AVERAGE" Phi Delta Kappan is 39.9 years old, has been a member of the fraternity for nine years, is married, and has 1.7 children, a master's degree, and either a teaching or administrative job in high school or college.

These bits of information come from a questionnaire circulated this spring among representative Phi Delta Kappans. The questionnaire was intended primarily to secure readership information for the use of PHI DELTA KAPPAN editorial consultants, but it also tells something about fraternity composition. In all, 231 questionnaires have been tabulated.

Additional facts: Only 12 per cent of the members do not have an advanced degree; 69 per cent have at least the master's. Some 30 per cent also have the doctor's degree (or will get it this year). The vast majority of members are employed in publicly controlled schools. Some 50 per cent teach, including 23 per cent in high school, 15 per cent in college, and 7 per cent in elementary school. About 42 per cent are school administrators, including men at all administrative levels. The sample indicates that there are at least 3,500 school superintendents among the good-standing fraternity membership.

Reading interests and practices are quite varied, but one thing can be said with confidence: the average Phi Delta Kappan is a voracious reader of professional and other literature. Six per cent of the members (this would be a total of nearly 5,000 men, if we include nominals) say they read annually a startling total of 30 books or more related to their profession. The average appears to be about eight or nine books a year. Beyond this, members read many books for pleasure or general information—about ten a year on the average.

In all, some 250 magazines in professional education were mentioned by respondents asked to name the journals they read regularly. Although admonished not to be merely "kind," nearly 40 per cent of those replying listed the PHI DELTA KAPPAN as their first choice of professional journals. The *Nation's Schools* ran a poor second, with 5 per cent of the votes. Another 22 per cent gave the KAPPAN the nod for a second place. Here the *NEA Journal* got 13 per cent of the votes. Among the most popular general magazines are *Life*, *Time*, the *Reader's Digest*, the *Saturday Evening Post*, *Newsweek*, *U. S. News & World Report*, the *Saturday Review*, *Look*, and *Harper's*.

The average KAPPAN reader covers about 51 per cent of the contents, but reads selectively, skimming most of the articles and reading a few carefully. A gratifying 10 per cent "nearly always read the entire issue."

Particularly noteworthy is the fact that most respondents like articles devoted to "controversial issues in education," which have been emphasized over the past two years. Some 60 per cent would like to see more of this type of article in the fraternity journal. A surprising number would also approve of more articles dealing with problems and issues in other areas of contemporary American society. Least popular among educational subjects is "history of education."

Returns from the four-page questionnaire have furnished the editor and editorial consultants with a great deal of useful information upon which to base policy in the future. An important set of recommendations addressed to the Board of Directors was drawn up by this group at an April meeting in Detroit, where City Superintendent Samuel M. Brownell played host to the other four consultants and the KAPPAN editor.